Delaware County Transportation Plan
2005 - 2030

Air Quality Conformity Documentation

DRAFT
May 17, 2005

Prepared for the
Delaware Muncie Metropolitan Plan Commission

May 2005

Prepared by:
Bernardin, Lochmueller & Associates, Inc.
6200 Vogel Road
Evansville, Indiana 47715
(812) 479-6200 * (800) 423-7411 * (812) 479-6262 FAX

Table of Contents

List of Tables

List of Figures

Introduction

Delaware County, Indiana was designated as a basic non attainment area for ozone under the 8-hour ozone standard in June of 2004. With this designation, the Delaware Muncie Metropolitan Planning Commission, serving as the Metropolitan Planning Organization for the Muncie - Delaware County area, is the agency responsible for conducting the air quality analyses. All plans, programs and projects must be reviewed for conformity with the standards to assure that they do not exceed the established budgets as established in the State Implementation Plan (SIP). Projects under the jurisdiction of the Indiana Department of Transportation (INDOT) and the Madison County Council of Governments (MCCOG) are located within Delaware County and have been included in the 2005-2030 Delaware-Muncie Transportation Plan and the transportation conformity analysis.

In general, examinations for conformity have two major components: (1) an air quality analysis to determine that air pollutant emissions do not exceed the budgets for VOCs and NOx set in the State Implementation Plan (SIP) and (2) a monitoring of the progress in implementation of the Transportation Control Measures (TCMs) contained in the SIP. Delaware County, as a newly designated non-attainment area, does not yet have an established emissions budget based upon a SIP. SIP development is not required to be completed until 3 years after an area is designated, in this case 3 years after June 2004, though it is possible that the SIP may be prepared sometime in 2005. After consultation with the state air agency (IDEM), US EPA, FHWA, and INDOT, it was agreed that an interim "no greater than" year 2002 baseline test would be used for the current Delaware County conformity analysis. Also, since no SIP has been established for Delaware County, there are no approved TCMs to be evaluated at this time. Therefore, it was possible to show conformity of the 2030 Transportation Plan simply by determining that the air pollutant emissions do not exceed the 2002 emissions.

The air quality analysis involved four procedures. First, a travel model using the TransCAD software was used to determine the vehicle-miles-traveled (VMT) for each of the analysis years (2002, 2010, 2015, 2025, and 2030). The VMT was then adjusted using factors which were derived for the base year (2002). These factors allow the model output to be reconciled with estimates of VMT from the Highway Performance Monitoring System (HPMS). Second, a post processing procedure was used to compute speeds, by three time periods of the day, for each facility type, and from that data, Mobile 6.2 input files were created. Third, the Mobile 6.2 emission factor model was used to determine the emission factors for VOCs and NOx. Fourth, the VMT by functional classification was then multiplied by the emission factors to determine the emissions. Further explanation of the components of the analysis is documented in this report.

Federal Conformity Requirements

Federal Regulations for Metropolitan Planning in 23 CFR (Code of Federal Regulations) Part 450 require that federally funded highway and transit projects be included in a conforming plan and Transportation Improvement Program (TIP). 40 CFR Part 93, amended August 15, 1997, outlines the requirements for making conformity determinations under Subpart A. Applicable requirements are listed below.

> *1. The Transportation Plan must specifically describe the transportation system envisioned for certain future years, which are called horizon years.*
>
> - *The horizon years may be no more than 10 years apart.*
> - *The first horizon year may not be more than 10 years from the base year used to validate the travel demand model.*
> - *If the attainment year is in the time span of the Transportation Plan, the attainment year must be a horizon year.*
> - *The last horizon year must be the last year of the Transportation Plan's forecast year.*

The 2030 Transportation Plan lists specific projects by time periods that meet this requirement. Traffic modeling for the conformity analysis was done for the years 2002, 2010, 2015, 2025, and 2030. The attainment year for SIP development will be 2015, thus this additional year was included.

> *2. The Transportation Plan will quantify and document the demographic and employment factors influencing the expected transportation demand; and the highway and transit system shall be described in terms of the regionally significant additions or modifications to the existing transportation network, which the transportation plan envisions to be operational in the horizon years.*

The documentation of how travel demand is estimated using existing and forecasted demographic and employment data is described in the March, 2005 Travel Demand Model Technical Documentation included as an appendix of the 2030 Transportation Plan. Regionally significant additions or modifications to the transportation system included in the financially constrained transportation plan are listed by time period in the next section of this report. Non-capacity increasing projects, which were not used in the conformity analysis, are listed in the main Transportation Plan document.

> *3. The Transportation Plan must be financially reasonable and the TIP must be fiscally constrained consistent with the U.S. DOT's metropolitan planning regulations at 23 CFR part 450 in order to be found in conformity.*

All projects included in the conformity analysis are fiscally constrained within the plan horizon. A list of illustrative (fiscally unconstrained) projects is also included in the main Transportation Plan document.

> *4. The conformity determination must be based on the latest emission estimation model available.*

This analysis uses the US EPA approved Mobile 6.2 software, which is the latest emission model available for use in Indiana.

> *5. The MPO must make the conformity determination according to the interagency consultation procedures required in 40 CFR Parts 51 and 93 (sections 51.390 and 93.105), and according to the public involvement procedures established by the MPO in compliance with 23 CFR Part 450.*

All major decisions relating to methodology, assumptions, and data used in the conformity analysis have been made via the interagency consultation process. Parties to the interagency consultation process include DMMPC, INDOT, IDEM, FHWA, US EPA, and FTA, each has had the opportunity to participate in the consultation meetings. The plan updated process has also included a public involvement component that is consistent with the MPO's currently adopted public involvement procedures.

> *6. The Transportation Plan must provide for the timely implementation of Traffic Control Measures (TCM) from the applicable State Implementation Plan (SIP). Nothing in the plan may interfere with the implementation of any TCM in the applicable implementation plan.*

An implementation plan has not yet been developed. No TCMs are currently applicable in the Muncie/Delaware County MPO area.

> *7. The Transportation Plan must be consistent with the motor vehicle emissions budget in the applicable State Implementation Plan (SIP).*

Delaware County was newly designated as a Basic Non-Attainment Area for Ozone in June 2004. A SIP has not yet been developed for this county, and thus a motor vehicle budget has not been created. During the interagency consultation process, an agreement was reached that the conformity determination for this Transportation Plan update would be done using an interim test whereby no future horizon year can exceed 2002 emissions.

> *8. The regional emissions analysis shall estimate emissions from the entire transportation system, including all regionally significant projects contained in the Transportation Plan and all other regionally significant highway and transit projects expected in the non-attainment area in the time frame of the Transportation Plan.*

All regionally significant projects within Delaware County have been included in the 2030 Transportation Plan list of projects. Those projects that involve an

increase in a regionally significant increase in capacity have been included in the conformity analysis.

> *9. The emissions analysis methodology shall meet the requirement of section 93.122: (a) Regional emissions analysis for the Transportation Plan shall include all regionally significant projects expected in the maintenance area. Projects that are not regionally significant are not required to be explicitly modeled, but VMT from such projects must be estimated in accordance with reasonable professional practices. The effects of TCM's and similar projects that are not regionally significant may also be estimated in accordance with reasonable professional practices. (b) For TCM's demonstrating a quantifiable emission reduction benefit, the emissions analysis may include that emissions reduction credit. (c) For areas with a Transportation Plan that meets the content requirements of section 93.106, the emissions analysis shall be performed for each horizon year.*

The emissions analysis methodology includes all regionally significant projects. VMT from all facilities is included in the analysis, including off-model facilities. There are no required TCMs for the Delaware County non-attainment area. There are also no additional credits being sought from the Congestion Mitigation and Air Quality (CMAQ) program funded projects that will be implemented in Delaware County.

2030 Long Range Plan

Capacity expansion projects that were explicitly modeled in the conformity analysis are listed below in Table 1. The fiscally constrained listing specifies, by conformity horizons, when projects are expected to be completed. For a complete listing of projects, capacity, non-capacity, financially constrained, and non-financially constrained, please refer to the main 2030 Transportation Plan document.

TABLE 1: Long Range Project List - Modeled

Year 2005-2010

Model Year	Project Name	Des Number	Miles	Project Type	Jurisdiction	Funding Phase
2010						
	(#1) Barr Extension		0.61	New Road	City of Muncie	2005-2009
	(#3) Morrison Widening		1.05	Center Turn Lane	Delaware County	2005-2009
	(#18) I-69	9700420	0	Added Travel Lanes	State	2005-2009
	(#19) Bypass (US 35/SR 3 & 67)	9901350	0	Grade Separation	State	2005-2009
	(#22) SR 32	9700310	1.71	Added Travel Lanes	State	2005-2009
	(#21) SR 32	9407670	0.65	Added Travel Lanes	State	2005-2009
	(#20) Centennial Grade Separation	9901360	0	Grade Separation	State	2005-2009
	(#23) SR 32	13680	3.84	Center Turn Lane	State	2005-2009
	(#2) Sutherland Extension		0.52	New Road	Yorktown	2005-2009

Year 2011-2015

Model Year	Project Name	Des Number	Miles	Project Type	Jurisdiction	Funding Phase
2015						
	(#4) Wheeling Widening	9786020	0.53	Added Travel Lanes	City of Muncie	2005-2009
	(#6) Evermore Extension		0.43	New Road	City of Muncie	2010-2014
	(#44) Centennial Median		0.52	Median/Center Lane	City of Muncie	2010-2014
	(#5) Everbrook Extension		0.22	New Road	City of Muncie	2010-2014
	(#8) Wheeling Widening	9522040	0.76	Added Travel Lanes	City of Muncie	2010-2014
	(#47) Walnut Median		0.28	Median/Center Lane	City of Muncie	2010-2014
	(#46) Walnut Median		0.75	Median/Center Lane	City of Muncie	2010-2014
	(#7) Jackson Widening		0.8	Center Turn Lane	City of Muncie	2010-2014
	(#43) Broadway Median		0.6	Median/Center Lane	City of Muncie	2010-2014
	(#9) Nebo Widening		1.32	Center Turn Lane	Delaware County	2005-2009
	(#11) Andrews/500W Connection		0.35	New Road/Bridge	Delaware County	2010-2014
	(#49) Morrison Median		0.24	Median/Center Lane	Delaware County	2010-2014
	(#10) Nebo Widening		0.91	Center Turn Lane	Delaware County	2010-2014
	(#24) SR 67	13720	5.5	Center Turn Lane	State	2005-2009
	(#25) SR 67	9901680	3.3	Center Turn Lane	State	2005-2009
	(#27) Bypass (US 35/SR 3 & 67)	13840	0	Interchange	State	2010-2014
	(#26) Bypass (US 35/SR 3 & 67)	13780	0	Interchange	State	2010-2014

Year 2016-2025

Model Year	Project Name	Des Number	Miles	Project Type	Jurisdiction	Funding Phase
2025						
	(#12) Riggin Widening		1.4	Center Turn Lane	City of Muncie	2015-2024
	(#16) Morrison Widening		0.9	Center Turn Lane	Delaware County	2015-2024
	(#14) CR 200S Extension		1	New Road	Delaware County	2015-2024
	(#15) Evermore Extension		1	New Road	Delaware County	2015-2024
	(#17) Nebo		2.92	Added Travel Lanes	Delaware County	2015-2024
	I-69 (#28)		0	Added Travel Lanes	State	2010-2014
	(#29) SR 3		1.62	Center Turn Lane	State	2010-2014
	(#13) CR 600W Extension		1	New Road	Yorktown	2015-2024

Year 2026-2030

Model Year	Project Name	Des Number	Miles	Project Type	Jurisdiction	Funding Phase
2030						
	(#30) SR 32		2.5	Added Travel Lanes	State	2015-2024

Travel Demand Model

The Muncie/Delaware County regional travel demand model is a mathematical computer model, using state of the art TransCAD software, which relates current and future travel demand to basic socioeconomic information. The model area covers all of Delaware County. This area is divided into 545 smaller units called traffic analysis zones. All major roadways are represented in the travel model.

The Muncie/Delaware County regional travel demand model underwent a recalibration and conversion to TransCAD software as part of the *Western Growth & Arterial Study* which was completed in 2003. This recalibration established 2000 as the new base year for the model. The model update and recalibration in 2003 utilized the latest data from the 2000 Census, ES202 employment dataset, 2000 Census Transportation Planning Package, and several additional sources which are reported in detail in the Travel Demand Model Technical Documentation. During the model calibration process, model parameters were adjusted such that the model output matched—within accepted standards--several calibration criteria based on measured data. These criteria included items such as comparisons against traffic counts, modeled vs. observed vehicle miles of travel, trip lengths by trip purpose, etc. The result of the

recalibration was a travel model which replicated travel in the Muncie area for 2002, and is capable of producing accurate traffic forecasts out to year 2030.

The recalibrated travel model was used in the regional air quality analysis. The Muncie/Delaware County travel demand model uses the standard four steps of modeling: trip generation, trip distribution, mode choice, and traffic assignment. In addition, it considers travel by vehicles (trucks and autos) entering, leaving, and crossing the study area. These types of trips are known as external-internal, internal-external, and external-external, respectively.

Trip generation is the process of determining the number of unlinked trip ends—called productions and attractions--and their spatial distribution based on socioeconomic variables such as households and employment. Trip rates used to define these relationships were derived from the travel data collection efforts described above. The internal trip purposes are home-based work, non home-based work, home-based other, home based other, non home-based other, home-based school.

Trip distribution is the process of linking the trip ends thereby creating trips which traverse the area. The travel model uses a gravity model to link all trips except the external-external ones. The gravity model is based on the principle that productions are linked to attractions as a direct function of the number of attractions of a zone and as an inverse function of the travel time between zones. This inverse function of travel time is used to generate parameters called friction factors which, in turn, direct the gravity model. The friction factors used in the gravity model were developed as part of the calibration effort performed during the model update of 2000.

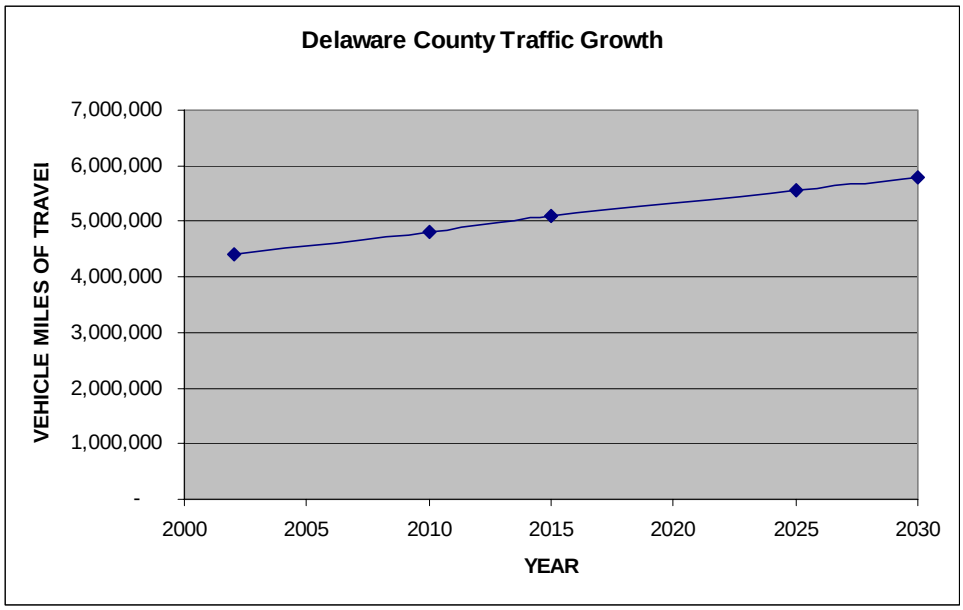
Mode choice is the process used to separate the trips which use transit from those which use automobiles. It is also used to separate the auto drive-alone trips from auto shared-ride trips. In the Muncie/Delaware County travel demand model, mode choice is modeled based on stratifications by trip purpose and travel times using recent household travel survey data from the 2000 Evansville Household Survey. This procedure accounts for person trips that use transit or shared-ride (carpool), and the result is a origin to destination auto trip table.

Traffic assignment is the process used to determine which links of the network an auto or truck trip will use. A capacity restraint provision is used to adjust travel times between assignment iterations, to account for the effects of congestion. This sequence is called an equilibrium assignment. The results of this process produces a forecast of traffic volumes on each link in the network and an estimate of congested travel speeds, which allows for the calculation of vehicle-miles-traveled (VMT) and vehicle-hours-traveled (VHT).

Each of the horizon years contained in the Transportation Plan were coded into the model as a specific socioeconomic forecast with appropriate network

capacity projects for that time period. These scenarios yielded the traffic forecasts used in the conformity analysis. Vehicle miles of travel forecasts from these model runs are summarized in Figure 1.

FIGURE 1: MODELED VEHICLE MILES OF TRAVEL



Model Post-Processing and Mobile 6.2 Input Files

Model outputs are expressed in terms daily volumes for each roadway segment. The raw model results from each scenario have traffic estimates only for those facilities coded in the model. These modeled traffic estimates generally include facilities that are classified as major collector or higher. Travel on the lower classed roadways (collector and local), while not entirely absent, is under-represented in the model. For estimating total emissions, raw model VMT is summarized by functional classification. These values are adjusted on a functional classification basis using a Model-to-HPMS VMT adjustment factor. The Model-to-HPMS VMT adjustment factor is calculated using the base year 2002 Model VMT compared to the base year HPMS reported VMT. HPMS is considered to be a more complete estimate of vehicle miles of travel in a county, and accounts for travel on all classifications of roadways. The HPMS adjustment factors are used in each of the Transportation Plan scenarios.

Table 2: HPMS Adjustment Factors

Functional Classification	Functional Class Code	HPMS Adjustment Factor
Rural Interstate	1	1.01
Rural Principal Arterial	2	0.88
Rural Minor Arterial	6	0.78
Rural Major Collector	7	3.52
Rural Minor Collector	8	0.56
Rural Local	9	4.22
Urban Interstate	11	0.92
Urban Expressway	12	1.06
Urban Principal Arterial	14	1.08
Urban Minor Arterial	16	1.03
Urban Collector	17	0.36
Urban Local	19	9.46

Additionally, it is necessary to post-process the model estimates of travel speed by each road link to better match observed speeds. In the post-processing, an average speed and VMT are computed for each time period for each link via excel spreadsheet. The spreadsheet also contains an attribute for FHWA functional class. In the post-processing, peak period volumes are compared to a peak period capacity to determine a volume to capacity ratio. Capacities use HCM 2000 methodology (described in the model documentation). Time of day factors by trip purpose in the Muncie/Delaware Model were derived from the 2000 Evansville Household Travel Survey, see table 3 below.

Table 3: Time of Day Factors

TIME OF DAY FACTORS BY TRIP PURPOSE					
PERIOD	HBW	HBSC	HBO	NHBW	NHBO
AM PEAK 3 HOURS	36.7%	47.5%	15.9%	17.6%	10.1%
PM PEAK 3 HOURS	30.8%	23.5%	26.1%	28.0%	23.7%
OFF PEAK 18 HOURS	32.5%	29.0%	58.0%	54.4%	66.2%

Source: 2000 Evansville Household Travel Survey

Volume to capacity (v/c) ratios for each link for each hour are then used to estimate a period specific speed. A BPR volume delay function was used to estimate the link speeds for each time period formulated as follows.

$$Speed_{congested} = \frac{Speed_{freeflow}}{1 + \alpha (v/c)^{\beta}}$$

Alpha and Beta parameters are US EPA recommended values, where:

Table 4: BPR Curve Parameters

Volume-Delay Curve Parameters		
	Under 60 mph	Over 60 mph
Alpha	0.20	0.15
Beta	8.00	10.00

To avoid unrealistically low average speeds, the V/C ratio is capped at 1.6. Any links that have a V/C ratio that exceeds 1.6 is assumed to remain at 1.6 for speed estimation purposes.

After speeds were estimated for each modeled link for the three daily time periods and for each of the analysis years, the data was aggregated by FHWA functional classification for use in Mobile 6.2 using the AVERAGE SPEED command. The average speed for each functional class was calculated using a VMT weighted average. The VMT weighted average was computed by multiplying the speed for each link by the link's VMT. Next, the Speed*VMT values were summed for each functional class. The functional class sum was divided by the sum of that functional class's modeled VMT to yield an average speed.

The calculated congested speeds for Rural Interstates, Urban Interstates and Urban Expressways were adjusted for an assumed percentage of ramp VMT according to the procedures outlined in the Mobile6 User's Guide Section

2.8.8.2.d. Speed assumptions are listed in Tables 7 through 11 and in the Mobile 6.2 input files contained in the Appendix.

Indiana specific VMT per vehicle type was derived by IDEM from the Indiana Department of Transportation (INDOT) 2002 state-wide HPMS data for vehicle classification for each of the twelve INDOT functional classes. The INDOT data covers thirteen vehicle groups which are different from the sixteen vehicle groups required by Mobile6. An adjustment was made by IDEM to convert the INDOT VMT fraction to a Mobile6 VMT fraction, and this data was provided by IDEM for the Muncie/Delaware analysis. The VMT fraction for each functional class was input to Mobile6 using the VMT FRACTION command. All VMT Fractions used in the analysis are listed in Table 5 and in the Mobile 6 input files contained in the Appendix.

Table 5: VMT Fractions

		Mobile 6 Vehicle Type															
HPMS Classification	**Mobile 6 Classification**	**LDV**	**LDT1**	**LDT2**	**LDT3**	**LDT4**	**HDV2B**	**HDV3**	**HDV4**	**HDV5**	**HDV6**	**HDV7**	**HDV8A**	**HDV8B**	**HDBS**	**HDBT**	**MC**
Rural Interstate	Freeway / Freeway Ramp	0.353	0.054	0.178	0.055	0.025	0.107	0.011	0.008	0.006	0.023	0.028	0.030	0.109	0.006	0.003	0.005
Rural Other Principal Arterial	Non-Ramp	0.433	0.066	0.219	0.068	0.031	0.057	0.006	0.005	0.003	0.013	0.015	0.016	0.059	0.003	0.002	0.005
Rural Minor Arterial	Arterial / Collector	0.466	0.071	0.236	0.073	0.033	0.037	0.004	0.003	0.002	0.008	0.010	0.011	0.038	0.003	0.001	0.004
Rural Major Collector	Arterial / Collector	0.482	0.073	0.244	0.075	0.035	0.028	0.003	0.002	0.002	0.006	0.007	0.008	0.028	0.002	0.001	0.005
Rural Minor Collector	Arterial / Collector	0.453	0.069	0.229	0.071	0.033	0.040	0.004	0.003	0.002	0.009	0.010	0.011	0.041	0.003	0.001	0.021
Rural Local	Arterial / Collector	0.479	0.073	0.242	0.075	0.034	0.029	0.003	0.002	0.002	0.007	0.008	0.008	0.030	0.003	0.001	0.005
Urban Interstate	Freeway / Freeway Ramp	0.416	0.063	0.210	0.065	0.030	0.069	0.007	0.005	0.004	0.015	0.018	0.020	0.070	0.004	0.002	0.003
Urban Freeway/Expressway	Freeway / Freeway Ramp	0.455	0.069	0.230	0.071	0.033	0.045	0.004	0.004	0.003	0.010	0.012	0.013	0.046	0.002	0.001	0.003
Urban Other Principal Arterial	Arterial / Collector	0.487	0.074	0.246	0.076	0.035	0.025	0.003	0.002	0.001	0.006	0.007	0.007	0.026	0.002	0.001	0.004
Urban Minor Arterial	Arterial / Collector	0.494	0.075	0.250	0.077	0.035	0.020	0.002	0.002	0.001	0.005	0.005	0.006	0.021	0.002	0.001	0.004
Urban Collector	Arterial / Collector	0.502	0.076	0.254	0.078	0.036	0.015	0.002	0.001	0.001	0.003	0.004	0.004	0.016	0.001	0.001	0.006
Urban Local	Local Road	0.510	0.078	0.258	0.080	0.037	0.011	0.001	0.001	0.001	0.002	0.003	0.003	0.011	0.003	0.001	0.003

Vehicle fleet age distribution was provided for light duty vehicles for Delaware County by IDEM, these values are used in the IN_cty18.d file. For other vehicle classes, the standard Mobile 6.2 defaults are used. The IN_cty18.d remains constant in each scenario, the file is listed in the Appendix

Other assumptions, such as the minimum and maximum July temperatures (64.0 and 84.9) for Muncie; absolute humidity (93.7), cloud cover (0.34), and sunrise/sunset (5am & 8pm respectively) were provided by IDEM. Each of these variables are specified in the Mobile 6.2 input files for each scenario.

The Mobile 6.2 model is run using the above-mentioned user inputs to get emission rates for each of the model scenarios. Emissions are then calculated from the adjusted VMT, by functional classification, using the Mobile 6.2 output emission rates.

Analysis Results

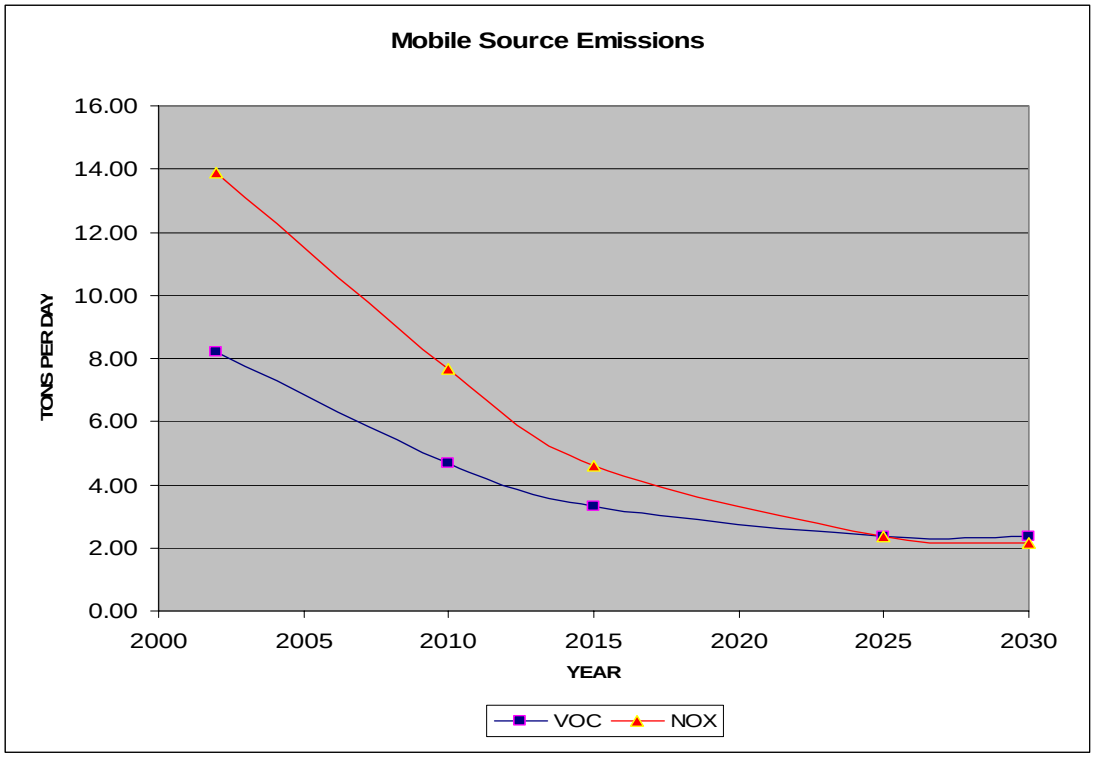
The regional emissions analysis was conducted to provide estimates of the levels of emissions of volatile organic compounds (VOC) and oxides of Nitrogen (NOx) for the various scenarios. VOC and NOx contribute directly to the production of ozone. Because no emission budgets are yet established for VOC and NOx, emissions are not permitted to exceed the 2002 levels.

The results of the regional emissions analysis are summarized in Tables 6 through 12, and in Figure 2. Table 6 shows that for each of the analysis years, the VOC and NOx emissions are less than those in 2002. Figure 2 illustrates that emissions for both ozone precursors is estimated to decline steadily over the next 25 years.

Table 6: Emission Analysis Results

Year	Daily VMT	VOC *Tons/day*	NOX *Tons/day*
2002	4,410,000	8.19	13.89
2010	4,822,355	4.69	7.66
2015	5,097,099	3.33	4.59
2025	5,548,298	2.36	2.38
2030	5,776,640	2.35	2.14

Figure 2: Emission Analysis Results



Tables 7-11: Detailed Emission Analysis Results

Modeled Vehicle Miles of Travel and Mobile Source Emissions for 2002 Scenario

	VMT		Average	VOC	NOX
	Model	Adjusted	Speed	Tons/day	Tons/day
Rural Interstate	563,723	581,000	69.6	0.81	4.75
Rural Principal Arterial	234,090	206,000	57.7	0.32	0.92
Rural Minor Arterial	246,120	193,000	52.0	0.32	0.56
Rural Major Collector	409,791	1,443,000	48.0	2.52	3.53
Rural Minor Collector	65,790	37,000	42.6	0.07	0.10
Rural Local	23,454	99,000	38.0	0.18	0.23
Urban Interstate	18,558	28,000	54.9	0.04	0.14
Urban Expressway	151,217	161,000	55.4	0.26	0.61
Urban Principal Arterial	590,397	637,000	36.0	1.21	1.41
Urban Minor Arterial	604,853	626,000	27.1	1.32	0.89
Urban Collector	223,966	81,000	27.1	0.17	0.16
Urban Local	33,609	318,000	29.0	0.97	0.58
Ramp	23,713	*		*	*
	3,189,280	4,410,000		8.19	13.89

* Adjusted vmt contains ramp vmt in Interstate and Expressway

Modeled Vehicle Miles of Travel and Mobile Source Emissions for 2010 Scenario

	VMT		Average	VOC	NOX
	Model	Adjusted	Speed	Tons/day	Tons/day
Rural Interstate	626,056	645,757	69.6	0.48	2.43
Rural Principal Arterial	248,217	218,432	57.9	0.18	0.45
Rural Minor Arterial	258,360	202,598	53.7	0.18	0.30
Rural Major Collector	448,083	1,577,837	48.3	1.47	1.95
Rural Minor Collector	68,073	38,284	42.6	0.04	0.05
Rural Local	25,547	107,835	38.1	0.11	0.13
Urban Interstate	20,577	31,535	54.7	0.03	0.07
Urban Expressway	190,888	203,237	55.6	0.18	0.36
Urban Principal Arterial	642,095	692,779	40.5	0.68	0.78
Urban Minor Arterial	636,534	658,789	32.1	0.69	0.69
Urban Collector	238,830	86,376	30.3	0.09	0.09
Urban Local	37,931	358,897	29.5	0.56	0.35
Ramp	27,354	*		*	*
	3,468,544	4,822,355		4.69	7.66

* Adjusted vmt contains ramp vmt in Interstate and Expressway

Modeled Vehicle Miles of Travel and Mobile Source Emissions for 2015 Scenario

	VMT		Average	VOC	NOX
	Model	Adjusted	Speed	Tons/day	Tons/day
Rural Interstate	669,554	692,516	69.5	0.35	1.32
Rural Principal Arterial	255,741	225,053	57.8	0.13	0.25
Rural Minor Arterial	270,648	212,234	53.8	0.12	0.18
Rural Major Collector	464,605	1,636,017	47.8	1.00	1.20
Rural Minor Collector	69,252	38,947	42.5	0.02	0.03
Rural Local	26,685	112,637	38.1	0.07	0.08
Urban Interstate	22,166	35,598	54.1	0.02	0.04
Urban Expressway	194,708	207,304	55.5	0.12	0.21
Urban Principal Arterial	662,680	714,990	33.8	0.48	0.48
Urban Minor Arterial	668,679	692,057	26.4	0.50	0.46
Urban Collector	245,406	88,754	28.0	0.06	0.06
Urban Local	46,608	440,992	28.7	0.45	0.28
Ramp	33,003	*		*	*
	3,629,734	5,097,099		3.33	4.59

* Adjusted vmt contains ramp vmt in Interstate and Expressway

Modeled Vehicle Miles of Travel and Mobile Source Emissions for 2025 Scenario

	VMT		Average	VOC	NOX
	Model	Adjusted	Speed	Tons/day	Tons/day
Rural Interstate	758,925	783,912	69.4	0.25	0.54
Rural Principal Arterial	278,152	244,775	57.4	0.09	0.12
Rural Minor Arterial	284,090	222,775	53.2	0.08	0.09
Rural Major Collector	508,874	1,791,901	46.7	0.71	0.69
Rural Minor Collector	73,288	41,217	42.2	0.02	0.02
Rural Local	27,688	116,872	38.2	0.05	0.04
Urban Interstate	25,411	39,665	54.5	0.01	0.02
Urban Expressway	207,444	220,865	55.4	0.08	0.10
Urban Principal Arterial	708,277	764,185	32.1	0.34	0.28
Urban Minor Arterial	717,510	742,596	27.0	0.35	0.28
Urban Collector	257,587	93,160	28.0	0.04	0.03
Urban Local	51,404	486,375	28.2	0.34	0.18
Ramp	35,350	*		*	*
	3,934,000	5,548,298		2.36	2.38

* Adjusted vmt contains ramp vmt in Interstate and Expressway

Modeled Vehicle Miles of Travel and Mobile Source Emissions for 2030 Scenario

	VMT		Average	VOC	NOX
	Model	Adjusted	Speed	Tons/day	Tons/day
Rural Interstate	807,747	834,011	69.2	0.26	0.43
Rural Principal Arterial	291,840	256,821	58.0	0.09	0.10
Rural Minor Arterial	292,749	229,565	52.7	0.08	0.08
Rural Major Collector	527,780	1,858,476	45.8	0.71	0.64
Rural Minor Collector	76,625	43,094	42.1	0.02	0.02
Rural Local	28,709	121,182	38.3	0.05	0.04
Urban Interstate	27,102	41,967	54.6	0.01	0.02
Urban Expressway	215,540	229,484	55.3	0.08	0.09
Urban Principal Arterial	737,393	795,600	31.0	0.32	0.26
Urban Minor Arterial	740,277	766,159	26.5	0.33	0.25
Urban Collector	269,022	97,295	27.7	0.04	0.03
Urban Local	53,160	502,986	27.9	0.35	0.17
Ramp	36,969	*		*	*
	4,104,913	5,776,640		2.35	2.14

* Adjusted vmt contains ramp vmt in Interstate and Expressway

The regional emissions analysis of the projects in the 2030 Transportation Plan indicates that the plan contributes to the improvement of air quality. In summary, it can be concluded that the Transportation Plan conforms to the national air quality standards.

Appendix – Mobile 6.2 Files

Delaware County Vehicle Registration – Input File

```
REG DIST
*
* THIS FILE CONTAINS THE DEFAULT MOBILE6 VALUES FOR THE DISTRIBUTION OF
* VEHICLES BY AGE FOR JULY OF ANY CALENDAR YEAR.  THERE ARE SIXTEEEN (16)
* SETS OF VALUES REPRESENTING 16 COMBINED GASOLINE/DIESEL VEHICLE CLASS
* DISTRIBUTIONS.  THESE DISTRIBUTIONS ARE SPLIT FOR GASOLINE AND DIESEL
* USING THE SEPARATE INPUT (OR DEFAULT) VALUES FOR DIESEL SALES FRACTIONS.
* EACH DISTRIBUTION CONTAINS 25 VALUES WHICH REPRESENT THE FRACTION OF
* ALL VEHICLES IN THAT CLASS (GASOLINE AND DIESEL) OF THAT AGE IN JULY.
* THE FIRST NUMBER IS FOR AGE 1 (CALENDAR YEAR MINUS MODEL YEAR PLUS ONE)
* AND THE LAST NUMBER IS FOR AGE 25.  THE LAST AGE INCLUDES ALL VEHICLES
* OF AGE 25 OR OLDER.  THE FIRST NUMBER IN EACH DISTRIBUTION IS AN INTEGER
* WHICH INDICATES WHICH OF THE 16 VEHICLE CLASSES ARE REPRESENTED BY THE
* DISTRIBUTION.  THE SIXTEEN VEHICLE CLASSES ARE:
*
*  1  LDV    LIGHT-DUTY VEHICLES (PASSENGER CARS)
*  2  LDT1   LIGHT-DUTY TRUCKS 1 (0-6,000 LBS. GVWR, 0-3750 LBS. LVW)
*  3  LDT2   LIGHT DUTY TRUCKS 2 (0-6,001 LBS. GVWR, 3751-5750 LBS. LVW)
*  4  LDT3   LIGHT DUTY TRUCKS 3 (6,001-8500 LBS. GVWR, 0-3750 LBS. LVW)
*  5  LDT4   LIGHT DUTY TRUCKS 4 (6,001-8500 LBS. GVWR, 3751-5750 LBS. LVW)
*  6  HDV2B  CLASS 2B HEAVY DUTY VEHICLES (8501-10,000 LBS. GVWR)
*  7  HDV3   CLASS 3 HEAVY DUTY VEHICLES (10,001-14,000 LBS. GVWR)
*  8  HDV4   CLASS 4 HEAVY DUTY VEHICLES (14,001-16,000 LBS. GVWR)
*  9  HDV5   CLASS 5 HEAVY DUTY VEHICLES (16,001-19,500 LBS. GVWR)
* 10  HDV6   CLASS 6 HEAVY DUTY VEHICLES (19,501-26,000 LBS. GVWR)
* 11  HDV7   CLASS 7 HEAVY DUTY VEHICLES (26,001-33,000 LBS. GVWR)
* 12  HDV8A  CLASS 8A HEAVY DUTY VEHICLES (33,001-60,000 LBS. GVWR)
* 13  HDV8B  CLASS 8B HEAVY DUTY VEHICLES (>60,000 LBS. GVWR)
* 14  HDBS   SCHOOL BUSSES
* 15  HDBT   TRANSIT AND URBAN BUSSES
* 16  MC     MOTORCYCLES (ALL)
*
* THE 25 AGE VALUES ARE ARRANGED IN TWO ROWS OF 10 VALUES FOLLOWED BY A ROW
* WITH THE LAST 5 VALUES.  COMMENTS (SUCH AS THIS ONE) ARE INDICATED BY
* AN ASTERISK IN THE FIRST COLUMN. EMPTY ROWS ARE IGNORED.  VALUES ARE
* READ "FREE FORMAT," MEANING ANY NUMBER MAY APPEAR IN ANY ROW WITH AS
* MANY CHARACTERS AS NEEDED (INCLUDING A DECIMAL) AS LONG AS 25 VALUES
* FOLLOW THE INITIAL INTEGER VALUE SEPARATED BY A SPACE.
*
* IF ALL 28 VEHICLE CLASSES DO NOT NEED TO BE ALTERED FROM THE DEFAULT
* VALUES, THEN ONLY THE VEHICLE CLASSES THAT NEED TO BE CHANGED NEED TO
* BE INCLUDED IN THIS FILE.  THE ORDER IN WHICH THE VEHICLE CLASSES ARE
* READ DOES NOT MATTER, HOWEVER EACH VEHICLE CLASS SET MUST CONTAIN 25
* VALUES AND BE IN THE PROPER AGE ORDER.
*
REG DIST
* COUNTY 18, DELAWARE
* LDV
1 0.0428 0.0571 0.0505 0.0495 0.0617 0.0591 0.0560 0.0588 0.0536 0.0615
  0.0564 0.0551 0.0551 0.0488 0.0416 0.0439 0.0343 0.0260 0.0215 0.0167
  0.0127 0.0065 0.0031 0.0037 0.0241
* LDT1
2 0.0411 0.0548 0.0485 0.0270 0.0331 0.0205 0.0306 0.0264 0.0459 0.0465
  0.0535 0.0475 0.0422 0.0659 0.0436 0.0700 0.0538 0.0600 0.0558 0.0439
  0.0254 0.0170 0.0126 0.0115 0.0229
* LDT2
3 0.0634 0.0845 0.0747 0.0605 0.0896 0.0810 0.0797 0.0761 0.0556 0.0527
  0.0511 0.0451 0.0365 0.0291 0.0223 0.0214 0.0239 0.0081 0.0083 0.0066
  0.0076 0.0043 0.0021 0.0025 0.0132
* LDT3
4 0.0468 0.0624 0.0552 0.0531 0.0694 0.0823 0.0549 0.0542 0.0546 0.0638
  0.0484 0.0419 0.0349 0.0171 0.0241 0.0321 0.0293 0.0213 0.0219 0.0184
  0.0162 0.0103 0.0063 0.0041 0.0772
* LDT4
5 0.0679 0.0905 0.0802 0.0761 0.0797 0.0878 0.0662 0.0612 0.0617 0.0504
  0.0374 0.0144 0.0243 0.0135 0.0194 0.0041 0.0054 0.0072 0.0104 0.0108
  0.0032 0.0009 0.0014 0.0005 0.1256
```

2002 SCENARIO FILES – MOBILE 6.2 INPUT FILE

```
******************** Header Section   ********************
MOBILE6 INPUT FILE : Delaware County Emissions 2002
DATABASE OUTPUT    :
WITH FIELDNAMES    :
AGGREGATED OUTPUT  :
POLLUTANTS         : HC NOX
REPORT FILE        : Muncie02.txt
EMISSIONS TABLE    : Muncie02.tb1
RUN DATA
******************** Run Section      ********************
* These min/max temperatures are July averages from Delaware County
MIN/MAX TEMP       : 64.0  84.9
ABSOLUTE HUMIDITY  : 93.7
CLOUD COVER        : 0.34
SUNRISE/SUNSET     : 5  8
FUEL RVP           : 9.0
NO REFUELING       :
REG DIST           : IN_cty18.d
******************** Scenario Section ********************
SCENARIO RECORD    : Scenario 1: Rural Interstate (M6 Freeway/Freeway Ramp)
CALENDAR YEAR      : 2002
EVALUATION MONTH   : 7
AVERAGE SPEED      : 69.6 FREEWAY 97.0  0.0  0.0  3.0
VMT FRACTIONS          :
0.3525 0.0536 0.1783 0.0549 0.0253 0.1065 0.0106 0.0084
0.0061 0.0234 0.0279 0.0304 0.1088 0.0058 0.0028 0.0047
******************** Scenario Section ********************
SCENARIO RECORD    : Scenario 2: Rural OPA (M6 Non-Ramp)
CALENDAR YEAR      : 2002
EVALUATION MONTH   : 7
AVERAGE SPEED      : 57.7 NON-RAMP
VMT FRACTIONS          :
0.4333 0.0658 0.2190 0.0675 0.0311 0.0573 0.0057 0.0045
0.0033 0.0126 0.0150 0.0164 0.0585 0.0033 0.0015 0.0052
******************** Scenario Section ********************
SCENARIO RECORD    : Scenario 3: Rural Minor Arterial (M6 Arterial/Collector)
CALENDAR YEAR      : 2002
EVALUATION MONTH   : 7
AVERAGE SPEED      : 52.0 ARTERIAL
VMT FRACTIONS          :
0.4662 0.0708 0.2357 0.0726 0.0334 0.0374 0.0037 0.0029
0.0022 0.0082 0.0098 0.0107 0.0382 0.0026 0.0013 0.0043
******************** Scenario Section ********************
SCENARIO RECORD    : Scenario 4: Rural Major Collector (M6 Arterial/Collector)
CALENDAR YEAR      : 2002
EVALUATION MONTH   : 7
AVERAGE SPEED      : 48.0 ARTERIAL
VMT FRACTIONS          :
0.4821 0.0732 0.2437 0.0751 0.0345 0.0275 0.0027 0.0022
0.0016 0.0060 0.0072 0.0078 0.0280 0.0024 0.0011 0.0049
******************** Scenario Section ********************
SCENARIO RECORD    : Scenario 5: Rural Minor Collector (M6 Arterial/Collector)
CALENDAR YEAR      : 2002
EVALUATION MONTH   : 7
AVERAGE SPEED      : 42.6 ARTERIAL
VMT FRACTIONS          :
0.4532 0.0689 0.2292 0.0706 0.0325 0.0399 0.0040 0.0031
0.0023 0.0088 0.0104 0.0114 0.0407 0.0026 0.0013 0.0211
******************** Scenario Section ********************
SCENARIO RECORD    : Scenario 6: Rural Local (M6 Arterial/Collector)
CALENDAR YEAR      : 2002
EVALUATION MONTH   : 7
AVERAGE SPEED      : 38.0 ARTERIAL
VMT FRACTIONS          :
0.4789 0.0728 0.2421 0.0746 0.0343 0.0294 0.0029 0.0023
0.0017 0.0065 0.0077 0.0084 0.0300 0.0026 0.0013 0.0045
******************** Scenario Section ********************
SCENARIO RECORD    : Scenario 7: Urban Interstate (M6 Freeway/Freeway Ramp)
CALENDAR YEAR      : 2002
EVALUATION MONTH   : 7
AVERAGE SPEED      : 54.9 FREEWAY 92.0  0.0  0.0  8.0
VMT FRACTIONS          :
0.4155 0.0631 0.2101 0.0647 0.0298 0.0688 0.0068 0.0054
0.0040 0.0151 0.0180 0.0196 0.0702 0.0043 0.0021 0.0025
******************** Scenario Section ********************
SCENARIO RECORD    : Scenario 8: Urban Freeway/Expressway (M6 Freeway/Freeway Ramp)
```

```
CALENDAR YEAR       : 2002
EVALUATION MONTH    : 7
AVERAGE SPEED       : 55.4 FREEWAY 92.0  0.0  0.0  8.0
VMT FRACTIONS             :
0.4554 0.0692 0.2303 0.0710 0.0326 0.0446 0.0044 0.0035
0.0026 0.0098 0.0117 0.0127 0.0456 0.0022 0.0011 0.0033
******************** Scenario Section ********************
SCENARIO RECORD     : Scenario 9: Urban OPA (M6 Arterial/Collector)
CALENDAR YEAR       : 2002
EVALUATION MONTH    : 7
AVERAGE SPEED       : 36.0 ARTERIAL
VMT FRACTIONS             :
0.4868 0.0740 0.2462 0.0759 0.0349 0.0251 0.0025 0.0020
0.0014 0.0055 0.0066 0.0072 0.0257 0.0015 0.0007 0.0040
******************** Scenario Section ********************
SCENARIO RECORD     : Scenario 10: Urban Minor Arterial (M6 Arterial/Collector)
CALENDAR YEAR       : 2002
EVALUATION MONTH    : 7
AVERAGE SPEED       : 27.1 ARTERIAL
VMT FRACTIONS             :
0.4944 0.0751 0.2499 0.0770 0.0354 0.0203 0.0020 0.0016
0.0012 0.0045 0.0053 0.0058 0.0207 0.0018 0.0008 0.0042
******************** Scenario Section ********************
SCENARIO RECORD     : Scenario 11: Urban Collector (M6 Arterial/Collector)
CALENDAR YEAR       : 2002
EVALUATION MONTH    : 7
AVERAGE SPEED       : 27.1 ARTERIAL
VMT FRACTIONS             :
0.5024 0.0763 0.2540 0.0783 0.0360 0.0152 0.0015 0.0012
0.0009 0.0033 0.0040 0.0043 0.0155 0.0010 0.0005 0.0056
******************** Scenario Section ********************
SCENARIO RECORD     : Scenario 12: Urban Local (M6 Local Road) - 12.9
CALENDAR YEAR       : 2002
EVALUATION MONTH    : 7
VMT BY FACILITY     : fvmtlocl.def
VMT FRACTIONS             :
0.5099 0.0775 0.2579 0.0795 0.0366 0.0106 0.0010 0.0008
0.0006 0.0023 0.0028 0.0030 0.0108 0.0028 0.0013 0.0026
END OF RUN          :
```

2002 SCENARIO FILES – MOBILE 6.2 OUTPUT FILE

```
************************************************************************
* MOBILE6.2.03 (24-Sep-2003)                                           *
* Input file: MUNCIE02.IN (file 1, run 1).                             *
************************************************************************
  M617 Comment:
               User supplied alternate AC input: Cloud Cover Fraction set to 0.34.
  M618 Comment:
               User supplied alternate AC input: Sunrise at  5 AM, Sunset at  8 PM.
  M603 Comment:
               User has disabled the calculation of REFUELING emissions.


* Reading Registration Distributions from the following external
* data file: IN_CTY18.D
  M 49 Warning:
                 1.00     MYR sum not = 1. (will normalize)
  M 49 Warning:
                 1.00     MYR sum not = 1. (will normalize)
  M 49 Warning:
                 1.00     MYR sum not = 1. (will normalize)
  M 49 Warning:
                 1.00     MYR sum not = 1. (will normalize)

* # # # # # # # # # # # # # # # # # # # # # # # # # # # #
* Scenario 1: Rural Interstate (M6 Freeway/Freeway Ramp)
* File 1, Run 1, Scenario 1.
* # # # # # # # # # # # # # # # # # # # # # # # # # # # #
  M 96 Warning:
                 69.6     speed reduced to 65 mph maximum
  M515 Warning:
            The combined freeway and ramp average speed entered
            cannot be greater than 63.3 miles per hour.
            The average speed will be reset to this value.
  M582 Warning:
            The user supplied freeway average speed of 63.3
            will be used for all hours of the day. 100% of VMT
            has been assigned to a fixed combination of freeways
            and freeway ramps for all hours of the day and all
             vehicle types.
  M615 Comment:
               User supplied VMT mix.
  M 48 Warning:
               there are no sales for vehicle class HDGV8b

                    Calendar Year:  2002
                            Month:  July
                         Altitude:  Low
               Minimum Temperature:  64.0 (F)
               Maximum Temperature:  84.9 (F)
                 Absolute Humidity:   94. grains/lb
                  Nominal Fuel RVP:   9.0 psi
                     Weathered RVP:   8.8 psi
               Fuel Sulfur Content:  279. ppm

               Exhaust I/M Program:  No
                  Evap I/M Program:  No
                       ATP Program:  No
                  Reformulated Gas:  No

      Vehicle Type:      LDGV    LDGT12    LDGT34      LDGT      HDGV      LDDV      LDDT      HDDV        MC   All Veh
              GVWR:                <6000     >6000     (All)
                       ------    ------    ------    ------    ------    ------    ------    ------    ------    ------
   VMT Distribution:    0.3517    0.2317    0.0791              0.0995    0.0008    0.0013    0.2312    0.0047    1.0000
  ------------------------------------------------------------------------------------------------------------------------
 Composite Emission Factors (g/mi):
     Composite VOC :      1.561     1.401     1.902     1.528     1.238     0.668     0.722     0.447      2.47     1.263
     Composite NOX :      1.341     1.421     1.726     1.499     5.993     2.780     2.604    25.453      1.59     7.432
  ------------------------------------------------------------------------------------------------------------------------

* # # # # # # # # # # # # # # # # # # # # # # # # # # # #
* Scenario 2: Rural OPA (M6 Non-Ramp)
* File 1, Run 1, Scenario 2.
* # # # # # # # # # # # # # # # # # # # # # # # # # # # #
  M581 Warning:
            The user supplied freeway average speed of 57.7
            will be used for all hours of the day. 100% of VMT
            has been assigned to the freeway roadway type for
            all hours of the day and all vehicle types.
  M615 Comment:
               User supplied VMT mix.
  M 48 Warning:
               there are no sales for vehicle class HDGV8b

                    Calendar Year:  2002
                            Month:  July
                         Altitude:  Low
               Minimum Temperature:  64.0 (F)
               Maximum Temperature:  84.9 (F)
                 Absolute Humidity:   94. grains/lb
                  Nominal Fuel RVP:   9.0 psi
                     Weathered RVP:   8.8 psi
               Fuel Sulfur Content:  279. ppm

               Exhaust I/M Program:  No
                  Evap I/M Program:  No
                       ATP Program:  No
                  Reformulated Gas:  No

      Vehicle Type:      LDGV    LDGT12    LDGT34      LDGT      HDGV      LDDV      LDDT      HDDV        MC   All Veh
              GVWR:                <6000     >6000     (All)
                       ------    ------    ------    ------    ------    ------    ------    ------    ------    ------
   VMT Distribution:    0.4323    0.2846    0.0972              0.0536    0.0010    0.0016    0.1245    0.0052    1.0000
  ------------------------------------------------------------------------------------------------------------------------
```

```
 Composite Emission Factors (g/mi):
     Composite VOC :      1.592     1.433     1.946     1.564     1.244     0.667     0.720     0.446      2.06     1.420
     Composite NOX :      1.308     1.380     1.684     1.457     5.758     2.167     2.026    21.042      1.42     4.063
  ---------------------------------------------------------------------------------------------------------------------

* # # # # # # # # # # # # # # # # # # # # # # # # #
* Scenario 3: Rural Minor Arterial (M6 Arterial/Collector)
* File 1, Run 1, Scenario 3.
* # # # # # # # # # # # # # # # # # # # # # # # # #
  M583 Warning:
            The user supplied arterial average speed of 52.0
            will be used for all hours of the day.  100% of VMT
            has been assigned to the arterial/collector roadway
            type for all hours of the day and all vehicle types.
  M615 Comment:
              User supplied VMT mix.
  M 48 Warning:
            there are no sales for vehicle class HDGV8b

                  Calendar Year:  2002
                          Month:  July
                       Altitude:  Low
              Minimum Temperature:  64.0 (F)
              Maximum Temperature:  84.9 (F)
                Absolute Humidity:   94. grains/lb
                 Nominal Fuel RVP:   9.0 psi
                    Weathered RVP:   8.8 psi
              Fuel Sulfur Content:  279. ppm

              Exhaust I/M Program:  No
                 Evap I/M Program:  No
                      ATP Program:  No
                 Reformulated Gas:  No

       Vehicle Type:      LDGV    LDGT12    LDGT34      LDGT      HDGV      LDDV      LDDT      HDDV        MC   All Veh
              GVWR:                 <6000     >6000     (All)
                       ------    ------    ------    ------    ------    ------    ------    ------    ------    ------
   VMT Distribution:    0.4652    0.3062    0.1045              0.0351    0.0010    0.0017    0.0819    0.0043    1.0000
  ---------------------------------------------------------------------------------------------------------------------
 Composite Emission Factors (g/mi):
     Composite VOC :      1.639     1.478     2.001     1.611     1.304     0.679     0.734     0.463      1.89     1.518
     Composite NOX :      1.287     1.353     1.655     1.430     5.554     1.838     1.717    15.353      1.27     2.649
  ---------------------------------------------------------------------------------------------------------------------

* # # # # # # # # # # # # # # # # # # # # # # # # #
* Scenario 4: Rural Major Collector (M6 Arterial/Collector)
* File 1, Run 1, Scenario 4.
* # # # # # # # # # # # # # # # # # # # # # # # # #
  M583 Warning:
            The user supplied arterial average speed of 48.0
            will be used for all hours of the day.  100% of VMT
            has been assigned to the arterial/collector roadway
            type for all hours of the day and all vehicle types.
  M615 Comment:
              User supplied VMT mix.
  M 48 Warning:
            there are no sales for vehicle class HDGV8b

                  Calendar Year:  2002
                          Month:  July
                       Altitude:  Low
              Minimum Temperature:  64.0 (F)
              Maximum Temperature:  84.9 (F)
                Absolute Humidity:   94. grains/lb
                 Nominal Fuel RVP:   9.0 psi
                    Weathered RVP:   8.8 psi
              Fuel Sulfur Content:  279. ppm

              Exhaust I/M Program:  No
                 Evap I/M Program:  No
                      ATP Program:  No
                 Reformulated Gas:  No

       Vehicle Type:      LDGV    LDGT12    LDGT34      LDGT      HDGV      LDDV      LDDT      HDDV        MC   All Veh
              GVWR:                 <6000     >6000     (All)
                       ------    ------    ------    ------    ------    ------    ------    ------    ------    ------
   VMT Distribution:    0.4810    0.3166    0.1081              0.0259    0.0011    0.0018    0.0606    0.0049    1.0000
  ---------------------------------------------------------------------------------------------------------------------
 Composite Emission Factors (g/mi):
     Composite VOC :      1.677     1.512     2.043     1.647     1.378     0.693     0.751     0.485      1.90     1.583
     Composite NOX :      1.274     1.334     1.637     1.411     5.419     1.682     1.570    14.177      1.19     2.222
  ---------------------------------------------------------------------------------------------------------------------

* # # # # # # # # # # # # # # # # # # # # # # # # #
* Scenario 5: Rural Minor Collector (M6 Arterial/Collector)
* File 1, Run 1, Scenario 5.
* # # # # # # # # # # # # # # # # # # # # # # # # #
  M583 Warning:
            The user supplied arterial average speed of 42.6
            will be used for all hours of the day.  100% of VMT
            has been assigned to the arterial/collector roadway
            type for all hours of the day and all vehicle types.
  M615 Comment:
              User supplied VMT mix.
  M 48 Warning:
            there are no sales for vehicle class HDGV8b

                  Calendar Year:  2002
                          Month:  July
                       Altitude:  Low
              Minimum Temperature:  64.0 (F)
              Maximum Temperature:  84.9 (F)
                Absolute Humidity:   94. grains/lb
                 Nominal Fuel RVP:   9.0 psi
                    Weathered RVP:   8.8 psi
              Fuel Sulfur Content:  279. ppm
```

```
             Exhaust I/M Program:  No
                Evap I/M Program:  No
                     ATP Program:  No
                Reformulated Gas:  No

      Vehicle Type:      LDGV    LDGT12    LDGT34      LDGT      HDGV      LDDV      LDDT      HDDV        MC   All Veh
              GVWR:                <6000     >6000     (All)
                       ------    ------    ------    ------    ------    ------    ------    ------    ------    ------
  VMT Distribution:    0.4522    0.2978    0.1017              0.0374    0.0010    0.0017    0.0871    0.0211    1.0000
 ---------------------------------------------------------------------------------------------------------------------
 Composite Emission Factors (g/mi):
    Composite VOC :      1.732     1.560     2.099     1.697     1.456     0.722     0.783     0.525      1.93     1.604
    Composite NOX :      1.257     1.310     1.613     1.387     5.192     1.546     1.443    13.161      1.14     2.491
 ---------------------------------------------------------------------------------------------------------------------

* # # # # # # # # # # # # # # # # # # # # # # # # #
* Scenario 6: Rural Local (M6 Arterial/Collector)
* File 1, Run 1, Scenario 6.
* # # # # # # # # # # # # # # # # # # # # # # # # #
  M583 Warning:
            The user supplied arterial average speed of 38.0
            will be used for all hours of the day.  100% of VMT
            has been assigned to the arterial/collector roadway
            type for all hours of the day and all vehicle types.
  M615 Comment:
             User supplied VMT mix.
  M 48 Warning:
            there are no sales for vehicle class HDGV8b

                  Calendar Year:  2002
                          Month:  July
                       Altitude:  Low
             Minimum Temperature:  64.0 (F)
             Maximum Temperature:  84.9 (F)
               Absolute Humidity:   94. grains/lb
                Nominal Fuel RVP:   9.0 psi
                   Weathered RVP:   8.8 psi
             Fuel Sulfur Content:  279. ppm

             Exhaust I/M Program:  No
                Evap I/M Program:  No
                     ATP Program:  No
                Reformulated Gas:  No

      Vehicle Type:      LDGV    LDGT12    LDGT34      LDGT      HDGV      LDDV      LDDT      HDDV        MC   All Veh
              GVWR:                <6000     >6000     (All)
                       ------    ------    ------    ------    ------    ------    ------    ------    ------    ------
  VMT Distribution:    0.4778    0.3146    0.1074              0.0277    0.0011    0.0018    0.0651    0.0045    1.0000
 ---------------------------------------------------------------------------------------------------------------------
 Composite Emission Factors (g/mi):
    Composite VOC :      1.784     1.602     2.150     1.741     1.606     0.756     0.822     0.575      1.99     1.680
    Composite NOX :      1.245     1.292     1.596     1.369     5.039     1.484     1.384    12.705      1.12     2.148
 ---------------------------------------------------------------------------------------------------------------------

* # # # # # # # # # # # # # # # # # # # # # # # # #
* Scenario 7: Urban Interstate (M6 Freeway/Freeway Ramp)
* File 1, Run 1, Scenario 7.
* # # # # # # # # # # # # # # # # # # # # # # # # #
  M582 Warning:
            The user supplied freeway average speed of 54.9
            will be used for all hours of the day. 100% of VMT
            has been assigned to a fixed combination of freeways
            and freeway ramps for all hours of the day and all
             vehicle types.
  M615 Comment:
             User supplied VMT mix.
  M 48 Warning:
             there are no sales for vehicle class HDGV8b

                   Calendar Year:  2002
                           Month:  July
                        Altitude:  Low
              Minimum Temperature:  64.0 (F)
              Maximum Temperature:  84.9 (F)
                Absolute Humidity:   94. grains/lb
                 Nominal Fuel RVP:   9.0 psi
                    Weathered RVP:   8.8 psi
              Fuel Sulfur Content:  279. ppm

              Exhaust I/M Program:  No
                 Evap I/M Program:  No
                      ATP Program:  No
                 Reformulated Gas:  No

      Vehicle Type:      LDGV    LDGT12    LDGT34      LDGT      HDGV      LDDV      LDDT      HDDV        MC   All Veh
              GVWR:                <6000     >6000     (All)
                       ------    ------    ------    ------    ------    ------    ------    ------    ------    ------
  VMT Distribution:    0.4146    0.2730    0.0932              0.0644    0.0009    0.0015    0.1499    0.0025    1.0000
 ---------------------------------------------------------------------------------------------------------------------
 Composite Emission Factors (g/mi):
    Composite VOC :      1.629     1.469     1.986     1.600     1.283     0.677     0.731     0.459      2.06     1.420
    Composite NOX :      1.325     1.399     1.703     1.476     5.698     2.120     1.982    20.247      1.40     4.500
 ---------------------------------------------------------------------------------------------------------------------

* # # # # # # # # # # # # # # # # # # # # # # # # #
* Scenario 8: Urban Freeway/Expressway (M6 Freeway/Freeway Ramp)
* File 1, Run 1, Scenario 8.
* # # # # # # # # # # # # # # # # # # # # # # # # #
  M582 Warning:
            The user supplied freeway average speed of 55.4
            will be used for all hours of the day. 100% of VMT
            has been assigned to a fixed combination of freeways
            and freeway ramps for all hours of the day and all
             vehicle types.
  M615 Comment:
```

```
              User supplied VMT mix.
  M 48 Warning:
             there are no sales for vehicle class HDGV8b

                   Calendar Year:  2002
                           Month:  July
                        Altitude:  Low
             Minimum Temperature:  64.0 (F)
             Maximum Temperature:  84.9 (F)
               Absolute Humidity:   94. grains/lb
                  Nominal Fuel RVP:   9.0 psi
                     Weathered RVP:   8.8 psi
             Fuel Sulfur Content:  279. ppm

             Exhaust I/M Program:  No
                Evap I/M Program:  No
                     ATP Program:  No
                Reformulated Gas:  No

       Vehicle Type:      LDGV    LDGT12    LDGT34      LDGT      HDGV      LDDV      LDDT      HDDV        MC   All Veh
             GVWR:                 <6000     >6000     (All)
                      ------    ------    ------    ------    ------    ------    ------    ------    ------    ------
  VMT Distribution:    0.4544    0.2992    0.1022              0.0416    0.0010    0.0017    0.0966    0.0033    1.0000
 -------------------------------------------------------------------------------------------------------------------
 Composite Emission Factors (g/mi):
     Composite VOC :      1.625     1.465     1.981     1.596     1.267     0.676     0.731     0.458      2.10     1.485
     Composite NOX :      1.327     1.401     1.705     1.479     5.705     2.157     2.017    20.536      1.41     3.428
 -------------------------------------------------------------------------------------------------------------------

* # # # # # # # # # # # # # # # # # # # # # # # # #
* Scenario 9: Urban OPA (M6 Arterial/Collector)
* File 1, Run 1, Scenario 9.
* # # # # # # # # # # # # # # # # # # # # # # # # #
  M583 Warning:
            The user supplied arterial average speed of 36.0
            will be used for all hours of the day.  100% of VMT
            has been assigned to the arterial/collector roadway
            type for all hours of the day and all vehicle types.
  M615 Comment:
              User supplied VMT mix.
  M 48 Warning:
             there are no sales for vehicle class HDGV8b

                   Calendar Year:  2002
                           Month:  July
                        Altitude:  Low
             Minimum Temperature:  64.0 (F)
             Maximum Temperature:  84.9 (F)
               Absolute Humidity:   94. grains/lb
                  Nominal Fuel RVP:   9.0 psi
                     Weathered RVP:   8.8 psi
             Fuel Sulfur Content:  279. ppm

             Exhaust I/M Program:  No
                Evap I/M Program:  No
                     ATP Program:  No
                Reformulated Gas:  No

       Vehicle Type:      LDGV    LDGT12    LDGT34      LDGT      HDGV      LDDV      LDDT      HDDV        MC   All Veh
             GVWR:                 <6000     >6000     (All)
                      ------    ------    ------    ------    ------    ------    ------    ------    ------    ------
  VMT Distribution:    0.4857    0.3199    0.1093              0.0235    0.0011    0.0018    0.0547    0.0040    1.0000
 -------------------------------------------------------------------------------------------------------------------
 Composite Emission Factors (g/mi):
     Composite VOC :      1.809     1.622     2.174     1.763     1.635     0.774     0.842     0.600      2.02     1.717
     Composite NOX :      1.241     1.286     1.590     1.363     4.935     1.469     1.370    12.583      1.10     2.001
 -------------------------------------------------------------------------------------------------------------------

* # # # # # # # # # # # # # # # # # # # # # # # # #
* Scenario 10: Urban Minor Arterial (M6 Arterial/Collector)
* File 1, Run 1, Scenario 10.
* # # # # # # # # # # # # # # # # # # # # # # # # #
  M583 Warning:
            The user supplied arterial average speed of 27.1
            will be used for all hours of the day.  100% of VMT
            has been assigned to the arterial/collector roadway
            type for all hours of the day and all vehicle types.
  M615 Comment:
              User supplied VMT mix.
  M 48 Warning:
             there are no sales for vehicle class HDGV8b

                   Calendar Year:  2002
                           Month:  July
                        Altitude:  Low
             Minimum Temperature:  64.0 (F)
             Maximum Temperature:  84.9 (F)
               Absolute Humidity:   94. grains/lb
                  Nominal Fuel RVP:   9.0 psi
                     Weathered RVP:   8.8 psi
             Fuel Sulfur Content:  279. ppm

             Exhaust I/M Program:  No
                Evap I/M Program:  No
                     ATP Program:  No
                Reformulated Gas:  No

       Vehicle Type:      LDGV    LDGT12    LDGT34      LDGT      HDGV      LDDV      LDDT      HDDV        MC   All Veh
             GVWR:                 <6000     >6000     (All)
                      ------    ------    ------    ------    ------    ------    ------    ------    ------    ------
  VMT Distribution:    0.4933    0.3247    0.1108              0.0192    0.0011    0.0018    0.0448    0.0042    1.0000
 -------------------------------------------------------------------------------------------------------------------
 Composite Emission Factors (g/mi):
     Composite VOC :      1.997     1.784     2.378     1.935     2.127     0.887     0.972     0.765      2.25     1.915
     Composite NOX :      1.295     1.329     1.641     1.409     4.626     1.507     1.406    12.867      1.03     1.927
 -------------------------------------------------------------------------------------------------------------------
```

```
* # # # # # # # # # # # # # # # # # # # # # # # # # # # #
* Scenario 11: Urban Collector (M6 Arterial/Collector)
* File 1, Run 1, Scenario 11.
* # # # # # # # # # # # # # # # # # # # # # # # # # # # #
  M583 Warning:
            The user supplied arterial average speed of 27.1
            will be used for all hours of the day.  100% of VMT
            has been assigned to the arterial/collector roadway
            type for all hours of the day and all vehicle types.
  M615 Comment:
              User supplied VMT mix.
  M 48 Warning:
              there are no sales for vehicle class HDGV8b

                    Calendar Year:  2002
                           Month:  July
                        Altitude:  Low
              Minimum Temperature:  64.0 (F)
              Maximum Temperature:  84.9 (F)
                Absolute Humidity:   94. grains/lb
                 Nominal Fuel RVP:   9.0 psi
                    Weathered RVP:   8.8 psi
              Fuel Sulfur Content:  279. ppm

              Exhaust I/M Program:  No
                 Evap I/M Program:  No
                      ATP Program:  No
                 Reformulated Gas:  No

       Vehicle Type:      LDGV    LDGT12    LDGT34      LDGT      HDGV      LDDV      LDDT      HDDV        MC   All Veh
             GVWR:                 <6000     >6000     (All)
                       ------    ------    ------    ------    ------    ------    ------    ------    ------    ------
   VMT Distribution:    0.5013    0.3300    0.1127              0.0142    0.0011    0.0019    0.0332    0.0056    1.0000
  ------------------------------------------------------------------------------------------------------------------------
 Composite Emission Factors (g/mi):
     Composite VOC :      1.997     1.784     2.378     1.935     2.087     0.887     0.971     0.763      2.25     1.928
     Composite NOX :      1.295     1.329     1.641     1.409     4.606     1.507     1.406    12.867      1.03     1.775
  ------------------------------------------------------------------------------------------------------------------------

* # # # # # # # # # # # # # # # # # # # # # # # # # # # #
* Scenario 12: Urban Local (M6 Local Road) - 12.9
* File 1, Run 1, Scenario 12.
* # # # # # # # # # # # # # # # # # # # # # # # # # # # #

* Reading Hourly Roadway VMT distribution from the following external
* data file: FVMTLOCL.DEF

  Reading User Supplied ROADWAY VMT Factors
  M615 Comment:
              User supplied VMT mix.
  M 48 Warning:
              there are no sales for vehicle class HDGV8b

                    Calendar Year:  2002
                           Month:  July
                        Altitude:  Low
              Minimum Temperature:  64.0 (F)
              Maximum Temperature:  84.9 (F)
                Absolute Humidity:   94. grains/lb
                 Nominal Fuel RVP:   9.0 psi
                    Weathered RVP:   8.8 psi
              Fuel Sulfur Content:  279. ppm

              Exhaust I/M Program:  No
                 Evap I/M Program:  No
                      ATP Program:  No
                 Reformulated Gas:  No

       Vehicle Type:      LDGV    LDGT12    LDGT34      LDGT      HDGV      LDDV      LDDT      HDDV        MC   All Veh
             GVWR:                 <6000     >6000     (All)
                       ------    ------    ------    ------    ------    ------    ------    ------    ------    ------
   VMT Distribution:    0.5088    0.3351    0.1145              0.0104    0.0011    0.0019    0.0256    0.0026    1.0000
  ------------------------------------------------------------------------------------------------------------------------
 Composite Emission Factors (g/mi):
     Composite VOC :      2.817     2.552     3.274     2.736     4.786     1.258     1.396     1.324      3.10     2.759
     Composite NOX :      1.239     1.237     1.546     1.316     4.193     1.957     1.829    14.421      0.88     1.642
  ------------------------------------------------------------------------------------------------------------------------
```

2010 SCENARIO FILES – MOBILE 6.2 INPUT FILE

```
******************** Header Section   ********************
MOBILE6 INPUT FILE : Delaware County Emissions 2010
DATABASE OUTPUT    :
WITH FIELDNAMES    :
AGGREGATED OUTPUT  :
POLLUTANTS         : HC NOX
REPORT FILE        : Muncie10.txt
EMISSIONS TABLE    : Muncie10.tb1
RUN DATA
******************** Run Section      ********************
* These min/max temperatures are July averages from Delaware County
MIN/MAX TEMP       : 64.0  84.9
ABSOLUTE HUMIDITY  : 93.7
CLOUD COVER        : 0.34
SUNRISE/SUNSET     : 5  8
FUEL RVP           : 9.0
NO REFUELING       :
REG DIST           : IN_cty18.d
******************** Scenario Section ********************
SCENARIO RECORD    : Scenario 1: Rural Interstate (M6 Freeway/Freeway Ramp)
CALENDAR YEAR      : 2010
EVALUATION MONTH   : 7
AVERAGE SPEED      : 69.6 FREEWAY 97.0  0.0  0.0  3.0
VMT FRACTIONS          :
0.3525 0.0536 0.1783 0.0549 0.0253 0.1065 0.0106 0.0084
0.0061 0.0234 0.0279 0.0304 0.1088 0.0058 0.0028 0.0047
******************** Scenario Section ********************
SCENARIO RECORD    : Scenario 2: Rural OPA (M6 Non-Ramp)
CALENDAR YEAR      : 2010
EVALUATION MONTH   : 7
AVERAGE SPEED      : 57.9 NON-RAMP
VMT FRACTIONS          :
0.4333 0.0658 0.2190 0.0675 0.0311 0.0573 0.0057 0.0045
0.0033 0.0126 0.0150 0.0164 0.0585 0.0033 0.0015 0.0052
******************** Scenario Section ********************
SCENARIO RECORD    : Scenario 3: Rural Minor Arterial (M6 Arterial/Collector)
CALENDAR YEAR      : 2010
EVALUATION MONTH   : 7
AVERAGE SPEED      : 53.7 ARTERIAL
VMT FRACTIONS          :
0.4662 0.0708 0.2357 0.0726 0.0334 0.0374 0.0037 0.0029
0.0022 0.0082 0.0098 0.0107 0.0382 0.0026 0.0013 0.0043
******************** Scenario Section ********************
SCENARIO RECORD    : Scenario 4: Rural Major Collector (M6 Arterial/Collector)
CALENDAR YEAR      : 2010
EVALUATION MONTH   : 7
AVERAGE SPEED      : 48.3 ARTERIAL
VMT FRACTIONS          :
0.4821 0.0732 0.2437 0.0751 0.0345 0.0275 0.0027 0.0022
0.0016 0.0060 0.0072 0.0078 0.0280 0.0024 0.0011 0.0049
******************** Scenario Section ********************
SCENARIO RECORD    : Scenario 5: Rural Minor Collector (M6 Arterial/Collector)
CALENDAR YEAR      : 2010
EVALUATION MONTH   : 7
AVERAGE SPEED      : 42.6 ARTERIAL
VMT FRACTIONS          :
0.4532 0.0689 0.2292 0.0706 0.0325 0.0399 0.0040 0.0031
0.0023 0.0088 0.0104 0.0114 0.0407 0.0026 0.0013 0.0211
******************** Scenario Section ********************
SCENARIO RECORD    : Scenario 6: Rural Local (M6 Arterial/Collector)
CALENDAR YEAR      : 2010
EVALUATION MONTH   : 7
AVERAGE SPEED      : 38.1 ARTERIAL
VMT FRACTIONS          :
0.4789 0.0728 0.2421 0.0746 0.0343 0.0294 0.0029 0.0023
0.0017 0.0065 0.0077 0.0084 0.0300 0.0026 0.0013 0.0045
******************** Scenario Section ********************
SCENARIO RECORD    : Scenario 7: Urban Interstate (M6 Freeway/Freeway Ramp)
CALENDAR YEAR      : 2010
EVALUATION MONTH   : 7
AVERAGE SPEED      : 54.7 FREEWAY 92.0  0.0  0.0  8.0
VMT FRACTIONS          :
0.4155 0.0631 0.2101 0.0647 0.0298 0.0688 0.0068 0.0054
0.0040 0.0151 0.0180 0.0196 0.0702 0.0043 0.0021 0.0025
******************** Scenario Section ********************
SCENARIO RECORD    : Scenario 8: Urban Freeway/Expressway (M6 Freeway/Freeway Ramp)
```

```
CALENDAR YEAR       : 2010
EVALUATION MONTH    : 7
AVERAGE SPEED       : 55.6 FREEWAY 92.0  0.0  0.0  8.0
VMT FRACTIONS             :
0.4554 0.0692 0.2303 0.0710 0.0326 0.0446 0.0044 0.0035
0.0026 0.0098 0.0117 0.0127 0.0456 0.0022 0.0011 0.0033
******************** Scenario Section ********************
SCENARIO RECORD     : Scenario 9: Urban OPA (M6 Arterial/Collector)
CALENDAR YEAR       : 2010
EVALUATION MONTH    : 7
AVERAGE SPEED       : 40.5 ARTERIAL
VMT FRACTIONS             :
0.4868 0.0740 0.2462 0.0759 0.0349 0.0251 0.0025 0.0020
0.0014 0.0055 0.0066 0.0072 0.0257 0.0015 0.0007 0.0040
******************** Scenario Section ********************
SCENARIO RECORD     : Scenario 10: Urban Minor Arterial (M6 Arterial/Collector)
CALENDAR YEAR       : 2010
EVALUATION MONTH    : 7
AVERAGE SPEED       : 32.1 ARTERIAL
VMT FRACTIONS             :
0.4944 0.0751 0.2499 0.0770 0.0354 0.0203 0.0020 0.0016
0.0012 0.0045 0.0053 0.0058 0.0207 0.0018 0.0008 0.0042
******************** Scenario Section ********************
SCENARIO RECORD     : Scenario 11: Urban Collector (M6 Arterial/Collector)
CALENDAR YEAR       : 2010
EVALUATION MONTH    : 7
AVERAGE SPEED       : 30.3 ARTERIAL
VMT FRACTIONS             :
0.5024 0.0763 0.2540 0.0783 0.0360 0.0152 0.0015 0.0012
0.0009 0.0033 0.0040 0.0043 0.0155 0.0010 0.0005 0.0056
******************** Scenario Section ********************
SCENARIO RECORD     : Scenario 12: Urban Local (M6 Local Road) - 12.9
CALENDAR YEAR       : 2010
EVALUATION MONTH    : 7
VMT BY FACILITY     : fvmtlocl.def
VMT FRACTIONS             :
0.5099 0.0775 0.2579 0.0795 0.0366 0.0106 0.0010 0.0008
0.0006 0.0023 0.0028 0.0030 0.0108 0.0028 0.0013 0.0026
END OF RUN          :
```

2010 SCENARIO FILES – MOBILE 6.2 OUTPUT FILE

```
***************************************************************************
* MOBILE6.2.03 (24-Sep-2003)                                              *
* Input file: MUNCIE10.IN (file 1, run 1).                                *
***************************************************************************
  M617 Comment:
             User supplied alternate AC input: Cloud Cover Fraction set to 0.34.
  M618 Comment:
             User supplied alternate AC input: Sunrise at  5 AM, Sunset at  8 PM.
  M603 Comment:
             User has disabled the calculation of REFUELING emissions.


* Reading Registration Distributions from the following external
* data file: IN_CTY18.D
  M 49 Warning:
               1.00     MYR sum not = 1. (will normalize)
  M 49 Warning:
               1.00     MYR sum not = 1. (will normalize)
  M 49 Warning:
               1.00     MYR sum not = 1. (will normalize)
  M 49 Warning:
               1.00     MYR sum not = 1. (will normalize)

* # # # # # # # # # # # # # # # # # # # # # # # # # # #
* Scenario 1: Rural Interstate (M6 Freeway/Freeway Ramp)
* File 1, Run 1, Scenario 1.
* # # # # # # # # # # # # # # # # # # # # # # # # # #
  M 96 Warning:
               69.6     speed reduced to 65 mph maximum
  M515 Warning:
            The combined freeway and ramp average speed entered
            cannot be greater than 63.3 miles per hour.
            The average speed will be reset to this value.
  M582 Warning:
            The user supplied freeway average speed of 63.3
            will be used for all hours of the day. 100% of VMT
            has been assigned to a fixed combination of freeways
            and freeway ramps for all hours of the day and all
             vehicle types.
  M615 Comment:
             User supplied VMT mix.
  M 48 Warning:
              there are no sales for vehicle class HDGV8b

                    Calendar Year:  2010
                            Month:  July
                         Altitude:  Low
              Minimum Temperature:  64.0 (F)
              Maximum Temperature:  84.9 (F)
                Absolute Humidity:   94. grains/lb
                 Nominal Fuel RVP:   9.0 psi
                    Weathered RVP:   8.8 psi
              Fuel Sulfur Content:   30. ppm

              Exhaust I/M Program:  No
                 Evap I/M Program:  No
                      ATP Program:  No
                 Reformulated Gas:  No

      Vehicle Type:     LDGV    LDGT12    LDGT34      LDGT      HDGV      LDDV      LDDT      HDDV        MC   All Veh
              GVWR:              <6000     >6000     (All)
                       ------   ------    ------    ------    ------    ------    ------    ------    ------    ------
   VMT Distribution:   0.3522   0.2319    0.0790              0.0974    0.0003    0.0012    0.2333    0.0047    1.0000
  ---------------------------------------------------------------------------------------------------------------------
 Composite Emission Factors (g/mi):
     Composite VOC :    0.850    0.742     0.935     0.791     0.594     0.188     0.318     0.253      2.44     0.674
     Composite NOX :    0.694    0.777     1.032     0.842     2.688     0.875     1.128    11.282      1.59     3.409
  ---------------------------------------------------------------------------------------------------------------------

* # # # # # # # # # # # # # # # # # # # # # # # # # #
* Scenario 2: Rural OPA (M6 Non-Ramp)
* File 1, Run 1, Scenario 2.
* # # # # # # # # # # # # # # # # # # # # # # # # # #
  M581 Warning:
            The user supplied freeway average speed of 57.9
            will be used for all hours of the day. 100% of VMT
            has been assigned to the freeway roadway type for
            all hours of the day and all vehicle types.
  M615 Comment:
             User supplied VMT mix.
  M 48 Warning:
              there are no sales for vehicle class HDGV8b

                    Calendar Year:  2010
                            Month:  July
                         Altitude:  Low
              Minimum Temperature:  64.0 (F)
              Maximum Temperature:  84.9 (F)
                Absolute Humidity:   94. grains/lb
                 Nominal Fuel RVP:   9.0 psi
                    Weathered RVP:   8.8 psi
              Fuel Sulfur Content:   30. ppm

              Exhaust I/M Program:  No
                 Evap I/M Program:  No
                      ATP Program:  No
                 Reformulated Gas:  No

      Vehicle Type:     LDGV    LDGT12    LDGT34      LDGT      HDGV      LDDV      LDDT      HDDV        MC   All Veh
              GVWR:              <6000     >6000     (All)
                       ------   ------    ------    ------    ------    ------    ------    ------    ------    ------
   VMT Distribution:   0.4329   0.2848    0.0972              0.0524    0.0004    0.0014    0.1257    0.0052    1.0000
  ---------------------------------------------------------------------------------------------------------------------
```

```
 Composite Emission Factors (g/mi):
     Composite VOC :      0.869     0.757     0.956     0.807     0.600     0.188     0.317     0.252      2.04     0.759
     Composite NOX :      0.677     0.756     1.007     0.820     2.586     0.685     0.882     9.003      1.43     1.883
  ---------------------------------------------------------------------------------------------------------------------------

* # # # # # # # # # # # # # # # # # # # # # # # # #
* Scenario 3: Rural Minor Arterial (M6 Arterial/Collector)
* File 1, Run 1, Scenario 3.
* # # # # # # # # # # # # # # # # # # # # # # # # #
  M583 Warning:
            The user supplied arterial average speed of 53.7
            will be used for all hours of the day.  100% of VMT
            has been assigned to the arterial/collector roadway
            type for all hours of the day and all vehicle types.
  M615 Comment:
              User supplied VMT mix.
  M 48 Warning:
            there are no sales for vehicle class HDGV8b

                  Calendar Year:  2010
                          Month:  July
                       Altitude:  Low
              Minimum Temperature:  64.0 (F)
              Maximum Temperature:  84.9 (F)
                Absolute Humidity:   94. grains/lb
                 Nominal Fuel RVP:   9.0 psi
                    Weathered RVP:   8.8 psi
              Fuel Sulfur Content:   30. ppm

              Exhaust I/M Program:  No
                 Evap I/M Program:  No
                      ATP Program:  No
                 Reformulated Gas:  No

       Vehicle Type:      LDGV    LDGT12    LDGT34      LDGT      HDGV      LDDV      LDDT      HDDV        MC   All Veh
              GVWR:                <6000     >6000     (All)
                       ------    ------    ------    ------    ------    ------    ------    ------    ------    ------
   VMT Distribution:    0.4658    0.3065    0.1045              0.0343    0.0004    0.0015    0.0827    0.0043    1.0000
  ---------------------------------------------------------------------------------------------------------------------------
 Composite Emission Factors (g/mi):
     Composite VOC :      0.888     0.771     0.975     0.823     0.617     0.190     0.322     0.259      1.86     0.803
     Composite NOX :      0.668     0.745     0.994     0.808     2.521     0.602     0.774     7.366      1.31     1.346
  ---------------------------------------------------------------------------------------------------------------------------

* # # # # # # # # # # # # # # # # # # # # # # # # #
* Scenario 4: Rural Major Collector (M6 Arterial/Collector)
* File 1, Run 1, Scenario 4.
* # # # # # # # # # # # # # # # # # # # # # # # # #
  M583 Warning:
            The user supplied arterial average speed of 48.3
            will be used for all hours of the day.  100% of VMT
            has been assigned to the arterial/collector roadway
            type for all hours of the day and all vehicle types.
  M615 Comment:
              User supplied VMT mix.
  M 48 Warning:
            there are no sales for vehicle class HDGV8b

                  Calendar Year:  2010
                          Month:  July
                       Altitude:  Low
              Minimum Temperature:  64.0 (F)
              Maximum Temperature:  84.9 (F)
                Absolute Humidity:   94. grains/lb
                 Nominal Fuel RVP:   9.0 psi
                    Weathered RVP:   8.8 psi
              Fuel Sulfur Content:   30. ppm

              Exhaust I/M Program:  No
                 Evap I/M Program:  No
                      ATP Program:  No
                 Reformulated Gas:  No

       Vehicle Type:      LDGV    LDGT12    LDGT34      LDGT      HDGV      LDDV      LDDT      HDDV        MC   All Veh
              GVWR:                <6000     >6000     (All)
                       ------    ------    ------    ------    ------    ------    ------    ------    ------    ------
   VMT Distribution:    0.4817    0.3169    0.1080              0.0252    0.0004    0.0016    0.0613    0.0049    1.0000
  ---------------------------------------------------------------------------------------------------------------------------
 Composite Emission Factors (g/mi):
     Composite VOC :      0.917     0.792     1.004     0.846     0.648     0.196     0.332     0.274      1.87     0.844
     Composite NOX :      0.657     0.731     0.978     0.794     2.437     0.530     0.682     6.518      1.19     1.122
  ---------------------------------------------------------------------------------------------------------------------------

* # # # # # # # # # # # # # # # # # # # # # # # # #
* Scenario 5: Rural Minor Collector (M6 Arterial/Collector)
* File 1, Run 1, Scenario 5.
* # # # # # # # # # # # # # # # # # # # # # # # # #
  M583 Warning:
            The user supplied arterial average speed of 42.6
            will be used for all hours of the day.  100% of VMT
            has been assigned to the arterial/collector roadway
            type for all hours of the day and all vehicle types.
  M615 Comment:
              User supplied VMT mix.
  M 48 Warning:
            there are no sales for vehicle class HDGV8b

                  Calendar Year:  2010
                          Month:  July
                       Altitude:  Low
              Minimum Temperature:  64.0 (F)
              Maximum Temperature:  84.9 (F)
                Absolute Humidity:   94. grains/lb
                 Nominal Fuel RVP:   9.0 psi
                    Weathered RVP:   8.8 psi
              Fuel Sulfur Content:   30. ppm
```

```
             Exhaust I/M Program:  No
                Evap I/M Program:  No
                     ATP Program:  No
                Reformulated Gas:  No

      Vehicle Type:      LDGV    LDGT12    LDGT34      LDGT      HDGV      LDDV      LDDT      HDDV        MC   All Veh
             GVWR:                <6000     >6000     (All)
                       ------    ------    ------    ------    ------    ------    ------    ------    ------    ------
  VMT Distribution:    0.4528    0.2981    0.1016              0.0365    0.0004    0.0015    0.0880    0.0211    1.0000
 ---------------------------------------------------------------------------------------------------------------------
Composite Emission Factors (g/mi):
    Composite VOC :      0.950     0.815     1.033     0.870     0.685     0.205     0.349     0.297      1.90     0.870
    Composite NOX :      0.646     0.717     0.963     0.779     2.329     0.484     0.623     5.918      1.14     1.235
 ---------------------------------------------------------------------------------------------------------------------

* # # # # # # # # # # # # # # # # # # # # # # # # #
* Scenario 6: Rural Local (M6 Arterial/Collector)
* File 1, Run 1, Scenario 6.
* # # # # # # # # # # # # # # # # # # # # # # # # #
  M583 Warning:
           The user supplied arterial average speed of 38.1
           will be used for all hours of the day.  100% of VMT
           has been assigned to the arterial/collector roadway
           type for all hours of the day and all vehicle types.
  M615 Comment:
            User supplied VMT mix.
  M 48 Warning:
           there are no sales for vehicle class HDGV8b

                Calendar Year:  2010
                       Month:  July
                    Altitude:  Low
           Minimum Temperature:  64.0 (F)
           Maximum Temperature:  84.9 (F)
             Absolute Humidity:   94. grains/lb
              Nominal Fuel RVP:   9.0 psi
                 Weathered RVP:   8.8 psi
           Fuel Sulfur Content:   30. ppm

           Exhaust I/M Program:  No
              Evap I/M Program:  No
                   ATP Program:  No
              Reformulated Gas:  No

      Vehicle Type:      LDGV    LDGT12    LDGT34      LDGT      HDGV      LDDV      LDDT      HDDV        MC   All Veh
             GVWR:                <6000     >6000     (All)
                       ------    ------    ------    ------    ------    ------    ------    ------    ------    ------
  VMT Distribution:    0.4785    0.3149    0.1073              0.0270    0.0004    0.0016    0.0658    0.0045    1.0000
 ---------------------------------------------------------------------------------------------------------------------
Composite Emission Factors (g/mi):
    Composite VOC :      0.978     0.834     1.058     0.891     0.733     0.216     0.368     0.326      1.96     0.895
    Composite NOX :      0.639     0.707     0.952     0.769     2.263     0.465     0.597     5.724      1.12     1.075
 ---------------------------------------------------------------------------------------------------------------------

* # # # # # # # # # # # # # # # # # # # # # # # # #
* Scenario 7: Urban Interstate (M6 Freeway/Freeway Ramp)
* File 1, Run 1, Scenario 7.
* # # # # # # # # # # # # # # # # # # # # # # # # #
  M582 Warning:
           The user supplied freeway average speed of 54.7
           will be used for all hours of the day. 100% of VMT
           has been assigned to a fixed combination of freeways
           and freeway ramps for all hours of the day and all
            vehicle types.
  M615 Comment:
            User supplied VMT mix.
  M 48 Warning:
           there are no sales for vehicle class HDGV8b

                Calendar Year:  2010
                       Month:  July
                    Altitude:  Low
           Minimum Temperature:  64.0 (F)
           Maximum Temperature:  84.9 (F)
             Absolute Humidity:   94. grains/lb
              Nominal Fuel RVP:   9.0 psi
                 Weathered RVP:   8.8 psi
           Fuel Sulfur Content:   30. ppm

           Exhaust I/M Program:  No
              Evap I/M Program:  No
                   ATP Program:  No
              Reformulated Gas:  No

      Vehicle Type:      LDGV    LDGT12    LDGT34      LDGT      HDGV      LDDV      LDDT      HDDV        MC   All Veh
             GVWR:                <6000     >6000     (All)
                       ------    ------    ------    ------    ------    ------    ------    ------    ------    ------
  VMT Distribution:    0.4151    0.2732    0.0931              0.0630    0.0004    0.0014    0.1513    0.0025    1.0000
 ---------------------------------------------------------------------------------------------------------------------
Composite Emission Factors (g/mi):
    Composite VOC :      0.887     0.770     0.974     0.822     0.616     0.191     0.323     0.261      2.02     0.753
    Composite NOX :      0.683     0.761     1.015     0.825     2.552     0.661     0.851     8.653      1.39     2.061
 ---------------------------------------------------------------------------------------------------------------------

* # # # # # # # # # # # # # # # # # # # # # # # # #
* Scenario 8: Urban Freeway/Expressway (M6 Freeway/Freeway Ramp)
* File 1, Run 1, Scenario 8.
* # # # # # # # # # # # # # # # # # # # # # # # # #
  M582 Warning:
           The user supplied freeway average speed of 55.6
           will be used for all hours of the day. 100% of VMT
           has been assigned to a fixed combination of freeways
           and freeway ramps for all hours of the day and all
            vehicle types.
  M615 Comment:
```

```
              User supplied VMT mix.
  M 48 Warning:
             there are no sales for vehicle class HDGV8b

                   Calendar Year:  2010
                           Month:  July
                        Altitude:  Low
             Minimum Temperature:  64.0 (F)
             Maximum Temperature:  84.9 (F)
               Absolute Humidity:   94. grains/lb
                Nominal Fuel RVP:   9.0 psi
                   Weathered RVP:   8.8 psi
             Fuel Sulfur Content:   30. ppm

             Exhaust I/M Program:  No
                Evap I/M Program:  No
                     ATP Program:  No
                Reformulated Gas:  No

      Vehicle Type:      LDGV    LDGT12    LDGT34      LDGT      HDGV      LDDV      LDDT      HDDV        MC   All Veh
             GVWR:                <6000     >6000     (All)
                      ------    ------    ------    ------    ------    ------    ------    ------    ------    ------
  VMT Distribution:    0.4550    0.2995    0.1021              0.0408    0.0004    0.0015    0.0974    0.0033    1.0000
 ---------------------------------------------------------------------------------------------------------------------
 Composite Emission Factors (g/mi):
     Composite VOC :      0.883     0.767     0.970     0.818     0.611     0.190     0.322     0.259      2.08     0.788
     Composite NOX :      0.685     0.764     1.018     0.828     2.562     0.683     0.879     8.882      1.42     1.620
 ---------------------------------------------------------------------------------------------------------------------

* # # # # # # # # # # # # # # # # # # # # # # # # # #
* Scenario 9: Urban OPA (M6 Arterial/Collector)
* File 1, Run 1, Scenario 9.
* # # # # # # # # # # # # # # # # # # # # # # # # # #
  M583 Warning:
            The user supplied arterial average speed of 40.5
            will be used for all hours of the day.  100% of VMT
            has been assigned to the arterial/collector roadway
            type for all hours of the day and all vehicle types.
  M615 Comment:
              User supplied VMT mix.
  M 48 Warning:
             there are no sales for vehicle class HDGV8b

                   Calendar Year:  2010
                           Month:  July
                        Altitude:  Low
             Minimum Temperature:  64.0 (F)
             Maximum Temperature:  84.9 (F)
               Absolute Humidity:   94. grains/lb
                Nominal Fuel RVP:   9.0 psi
                   Weathered RVP:   8.8 psi
             Fuel Sulfur Content:   30. ppm

             Exhaust I/M Program:  No
                Evap I/M Program:  No
                     ATP Program:  No
                Reformulated Gas:  No

      Vehicle Type:      LDGV    LDGT12    LDGT34      LDGT      HDGV      LDDV      LDDT      HDDV        MC   All Veh
             GVWR:                <6000     >6000     (All)
                      ------    ------    ------    ------    ------    ------    ------    ------    ------    ------
  VMT Distribution:    0.4864    0.3202    0.1092              0.0229    0.0004    0.0016    0.0553    0.0040    1.0000
 ---------------------------------------------------------------------------------------------------------------------
 Composite Emission Factors (g/mi):
     Composite VOC :      0.963     0.823     1.045     0.880     0.702     0.209     0.357     0.309      1.92     0.888
     Composite NOX :      0.642     0.711     0.957     0.774     2.289     0.472     0.606     5.753      1.13     1.021
 ---------------------------------------------------------------------------------------------------------------------

* # # # # # # # # # # # # # # # # # # # # # # # # # #
* Scenario 10: Urban Minor Arterial (M6 Arterial/Collector)
* File 1, Run 1, Scenario 10.
* # # # # # # # # # # # # # # # # # # # # # # # # # #
  M583 Warning:
            The user supplied arterial average speed of 32.1
            will be used for all hours of the day.  100% of VMT
            has been assigned to the arterial/collector roadway
            type for all hours of the day and all vehicle types.
  M615 Comment:
              User supplied VMT mix.
  M 48 Warning:
             there are no sales for vehicle class HDGV8b

                   Calendar Year:  2010
                           Month:  July
                        Altitude:  Low
             Minimum Temperature:  64.0 (F)
             Maximum Temperature:  84.9 (F)
               Absolute Humidity:   94. grains/lb
                Nominal Fuel RVP:   9.0 psi
                   Weathered RVP:   8.8 psi
             Fuel Sulfur Content:   30. ppm

             Exhaust I/M Program:  No
                Evap I/M Program:  No
                     ATP Program:  No
                Reformulated Gas:  No

      Vehicle Type:      LDGV    LDGT12    LDGT34      LDGT      HDGV      LDDV      LDDT      HDDV        MC   All Veh
             GVWR:                <6000     >6000     (All)
                      ------    ------    ------    ------    ------    ------    ------    ------    ------    ------
  VMT Distribution:    0.4940    0.3250    0.1108              0.0186    0.0004    0.0016    0.0454    0.0042    1.0000
 ---------------------------------------------------------------------------------------------------------------------
 Composite Emission Factors (g/mi):
     Composite VOC :      1.029     0.870     1.106     0.930     0.814     0.235     0.404     0.376      2.08     0.955
     Composite NOX :      0.643     0.707     0.953     0.770     2.162     0.460     0.590     5.647      1.07     0.955
 ---------------------------------------------------------------------------------------------------------------------
```

```
* # # # # # # # # # # # # # # # # # # # # # # # # # # # #
* Scenario 11: Urban Collector (M6 Arterial/Collector)
* File 1, Run 1, Scenario 11.
* # # # # # # # # # # # # # # # # # # # # # # # # # # # #
  M583 Warning:
            The user supplied arterial average speed of 30.3
            will be used for all hours of the day.  100% of VMT
            has been assigned to the arterial/collector roadway
            type for all hours of the day and all vehicle types.
  M615 Comment:
              User supplied VMT mix.
  M 48 Warning:
              there are no sales for vehicle class HDGV8b

                    Calendar Year:  2010
                           Month:  July
                        Altitude:  Low
              Minimum Temperature:  64.0 (F)
              Maximum Temperature:  84.9 (F)
                Absolute Humidity:   94. grains/lb
                 Nominal Fuel RVP:   9.0 psi
                    Weathered RVP:   8.8 psi
              Fuel Sulfur Content:   30. ppm

              Exhaust I/M Program:  No
                 Evap I/M Program:  No
                      ATP Program:  No
                 Reformulated Gas:  No

       Vehicle Type:      LDGV    LDGT12    LDGT34      LDGT      HDGV      LDDV      LDDT      HDDV        MC   All Veh
             GVWR:                 <6000     >6000     (All)
                      ------    ------    ------    ------    ------    ------    ------    ------    ------    ------
   VMT Distribution:    0.5020    0.3303    0.1126              0.0139    0.0004    0.0017    0.0335    0.0056    1.0000
  ---------------------------------------------------------------------------------------------------------------------
 Composite Emission Factors (g/mi):
     Composite VOC :      1.049     0.886     1.127     0.947     0.840     0.242     0.418     0.394      2.13     0.984
     Composite NOX :      0.649     0.712     0.959     0.775     2.118     0.461     0.592     5.634      1.06     0.894
  ---------------------------------------------------------------------------------------------------------------------

* # # # # # # # # # # # # # # # # # # # # # # # # # # # #
* Scenario 12: Urban Local (M6 Local Road) - 12.9
* File 1, Run 1, Scenario 12.
* # # # # # # # # # # # # # # # # # # # # # # # # # # # #

* Reading Hourly Roadway VMT distribution from the following external
* data file: FVMTLOCL.DEF

  Reading User Supplied ROADWAY VMT Factors
  M615 Comment:
              User supplied VMT mix.
  M 48 Warning:
              there are no sales for vehicle class HDGV8b

                    Calendar Year:  2010
                           Month:  July
                        Altitude:  Low
              Minimum Temperature:  64.0 (F)
              Maximum Temperature:  84.9 (F)
                Absolute Humidity:   94. grains/lb
                 Nominal Fuel RVP:   9.0 psi
                    Weathered RVP:   8.8 psi
              Fuel Sulfur Content:   30. ppm

              Exhaust I/M Program:  No
                 Evap I/M Program:  No
                      ATP Program:  No
                 Reformulated Gas:  No

       Vehicle Type:      LDGV    LDGT12    LDGT34      LDGT      HDGV      LDDV      LDDT      HDDV        MC   All Veh
             GVWR:                 <6000     >6000     (All)
                      ------    ------    ------    ------    ------    ------    ------    ------    ------    ------
   VMT Distribution:    0.5094    0.3354    0.1144              0.0099    0.0005    0.0017    0.0261    0.0026    1.0000
  ---------------------------------------------------------------------------------------------------------------------
 Composite Emission Factors (g/mi):
     Composite VOC :      1.509     1.276     1.605     1.360     1.695     0.376     0.661     0.758      3.07     1.426
     Composite NOX :      0.646     0.699     0.943     0.761     1.890     0.614     0.791     7.576      0.88     0.892
  ---------------------------------------------------------------------------------------------------------------------
  ---------------------------------------------------------------------------------------------------------------------
```

2015 SCENARIO FILES – MOBILE 6.2 INPUT FILE

```
******************** Header Section   ********************
MOBILE6 INPUT FILE : Delaware County Emissions 2015
DATABASE OUTPUT    :
WITH FIELDNAMES    :
AGGREGATED OUTPUT  :
POLLUTANTS         : HC NOX
REPORT FILE        : Muncie15.txt
EMISSIONS TABLE    : Muncie15.tb1
RUN DATA
******************** Run Section      ********************
* These min/max temperatures are July averages from Greene County
MIN/MAX TEMP       : 64.0  84.9
ABSOLUTE HUMIDITY  : 93.7
CLOUD COVER        : 0.34
SUNRISE/SUNSET     : 5  8
FUEL RVP           : 9.0
NO REFUELING       :
REG DIST           : IN_cty18.d
******************** Scenario Section ********************
SCENARIO RECORD    : Scenario 1: Rural Interstate (M6 Freeway/Freeway Ramp)
CALENDAR YEAR      : 2015
EVALUATION MONTH   : 7
AVERAGE SPEED      : 69.5 FREEWAY 97.0  0.0  0.0  3.0
VMT FRACTIONS          :
0.3525 0.0536 0.1783 0.0549 0.0253 0.1065 0.0106 0.0084
0.0061 0.0234 0.0279 0.0304 0.1088 0.0058 0.0028 0.0047
******************** Scenario Section ********************
SCENARIO RECORD    : Scenario 2: Rural OPA (M6 Non-Ramp)
CALENDAR YEAR      : 2015
EVALUATION MONTH   : 7
AVERAGE SPEED      : 57.8 NON-RAMP
VMT FRACTIONS          :
0.4333 0.0658 0.2190 0.0675 0.0311 0.0573 0.0057 0.0045
0.0033 0.0126 0.0150 0.0164 0.0585 0.0033 0.0015 0.0052
******************** Scenario Section ********************
SCENARIO RECORD    : Scenario 3: Rural Minor Arterial (M6 Arterial/Collector)
CALENDAR YEAR      : 2015
EVALUATION MONTH   : 7
AVERAGE SPEED      : 53.8 ARTERIAL
VMT FRACTIONS          :
0.4662 0.0708 0.2357 0.0726 0.0334 0.0374 0.0037 0.0029
0.0022 0.0082 0.0098 0.0107 0.0382 0.0026 0.0013 0.0043
******************** Scenario Section ********************
SCENARIO RECORD    : Scenario 4: Rural Major Collector (M6 Arterial/Collector)
CALENDAR YEAR      : 2015
EVALUATION MONTH   : 7
AVERAGE SPEED      : 47.8 ARTERIAL
VMT FRACTIONS          :
0.4821 0.0732 0.2437 0.0751 0.0345 0.0275 0.0027 0.0022
0.0016 0.0060 0.0072 0.0078 0.0280 0.0024 0.0011 0.0049
******************** Scenario Section ********************
SCENARIO RECORD    : Scenario 5: Rural Minor Collector (M6 Arterial/Collector)
CALENDAR YEAR      : 2015
EVALUATION MONTH   : 7
AVERAGE SPEED      : 42.5 ARTERIAL
VMT FRACTIONS          :
0.4532 0.0689 0.2292 0.0706 0.0325 0.0399 0.0040 0.0031
0.0023 0.0088 0.0104 0.0114 0.0407 0.0026 0.0013 0.0211
******************** Scenario Section ********************
SCENARIO RECORD    : Scenario 6: Rural Local (M6 Arterial/Collector)
CALENDAR YEAR      : 2015
EVALUATION MONTH   : 7
AVERAGE SPEED      : 38.1 ARTERIAL
VMT FRACTIONS          :
0.4789 0.0728 0.2421 0.0746 0.0343 0.0294 0.0029 0.0023
0.0017 0.0065 0.0077 0.0084 0.0300 0.0026 0.0013 0.0045
******************** Scenario Section ********************
SCENARIO RECORD    : Scenario 7: Urban Interstate (M6 Freeway/Freeway Ramp)
CALENDAR YEAR      : 2015
EVALUATION MONTH   : 7
AVERAGE SPEED      : 54.1 FREEWAY 92.0  0.0  0.0  8.0
VMT FRACTIONS          :
0.4155 0.0631 0.2101 0.0647 0.0298 0.0688 0.0068 0.0054
0.0040 0.0151 0.0180 0.0196 0.0702 0.0043 0.0021 0.0025
******************** Scenario Section ********************
SCENARIO RECORD    : Scenario 8: Urban Freeway/Expressway (M6 Freeway/Freeway Ramp)
```

```
CALENDAR YEAR       : 2015
EVALUATION MONTH    : 7
AVERAGE SPEED       : 55.5 FREEWAY 92.0  0.0  0.0  8.0
VMT FRACTIONS             :
0.4554 0.0692 0.2303 0.0710 0.0326 0.0446 0.0044 0.0035
0.0026 0.0098 0.0117 0.0127 0.0456 0.0022 0.0011 0.0033
******************** Scenario Section ********************
SCENARIO RECORD     : Scenario 9: Urban OPA (M6 Arterial/Collector)
CALENDAR YEAR       : 2015
EVALUATION MONTH    : 7
AVERAGE SPEED       : 33.8 ARTERIAL
VMT FRACTIONS             :
0.4868 0.0740 0.2462 0.0759 0.0349 0.0251 0.0025 0.0020
0.0014 0.0055 0.0066 0.0072 0.0257 0.0015 0.0007 0.0040
******************** Scenario Section ********************
SCENARIO RECORD     : Scenario 10: Urban Minor Arterial (M6 Arterial/Collector)
CALENDAR YEAR       : 2015
EVALUATION MONTH    : 7
AVERAGE SPEED       : 26.4 ARTERIAL
VMT FRACTIONS             :
0.4944 0.0751 0.2499 0.0770 0.0354 0.0203 0.0020 0.0016
0.0012 0.0045 0.0053 0.0058 0.0207 0.0018 0.0008 0.0042
******************** Scenario Section ********************
SCENARIO RECORD     : Scenario 11: Urban Collector (M6 Arterial/Collector)
CALENDAR YEAR       : 2015
EVALUATION MONTH    : 7
AVERAGE SPEED       : 28.0 ARTERIAL
VMT FRACTIONS             :
0.5024 0.0763 0.2540 0.0783 0.0360 0.0152 0.0015 0.0012
0.0009 0.0033 0.0040 0.0043 0.0155 0.0010 0.0005 0.0056
******************** Scenario Section ********************
SCENARIO RECORD     : Scenario 12: Urban Local (M6 Local Road) - 12.9
CALENDAR YEAR       : 2015
EVALUATION MONTH    : 7
VMT BY FACILITY     : fvmtlocl.def
VMT FRACTIONS             :
0.5099 0.0775 0.2579 0.0795 0.0366 0.0106 0.0010 0.0008
0.0006 0.0023 0.0028 0.0030 0.0108 0.0028 0.0013 0.0026
END OF RUN          :
```

2015 SCENARIO FILES – MOBILE 6.2 OUTPUT FILE

```
************************************************************************
* MOBILE6.2.03 (24-Sep-2003)                                           *
* Input file: MUNCIE15.IN (file 1, run 1).                             *
************************************************************************
  M617 Comment:
               User supplied alternate AC input: Cloud Cover Fraction set to 0.34.
  M618 Comment:
               User supplied alternate AC input: Sunrise at  5 AM, Sunset at  8 PM.
  M603 Comment:
               User has disabled the calculation of REFUELING emissions.


* Reading Registration Distributions from the following external
* data file: IN_CTY18.D
  M 49 Warning:
                 1.00     MYR sum not = 1. (will normalize)
  M 49 Warning:
                 1.00     MYR sum not = 1. (will normalize)
  M 49 Warning:
                 1.00     MYR sum not = 1. (will normalize)
  M 49 Warning:
                 1.00     MYR sum not = 1. (will normalize)

* # # # # # # # # # # # # # # # # # # # # # # # # # # # #
* Scenario 1: Rural Interstate (M6 Freeway/Freeway Ramp)
* File 1, Run 1, Scenario 1.
* # # # # # # # # # # # # # # # # # # # # # # # # # # # #
  M 96 Warning:
                 69.5     speed reduced to 65 mph maximum
  M515 Warning:
            The combined freeway and ramp average speed entered
            cannot be greater than 63.3 miles per hour.
            The average speed will be reset to this value.
  M582 Warning:
            The user supplied freeway average speed of 63.3
            will be used for all hours of the day. 100% of VMT
            has been assigned to a fixed combination of freeways
            and freeway ramps for all hours of the day and all
             vehicle types.
  M615 Comment:
               User supplied VMT mix.
  M 48 Warning:
               there are no sales for vehicle class HDGV8b
  M 48 Warning:
               there are no sales for vehicle class LDDT12

                    Calendar Year:  2015
                            Month:  July
                         Altitude:  Low
               Minimum Temperature:  64.0 (F)
               Maximum Temperature:  84.9 (F)
                 Absolute Humidity:   94. grains/lb
                  Nominal Fuel RVP:   9.0 psi
                     Weathered RVP:   8.8 psi
               Fuel Sulfur Content:   30. ppm

               Exhaust I/M Program:  No
                  Evap I/M Program:  No
                       ATP Program:  No
                  Reformulated Gas:  No

      Vehicle Type:      LDGV    LDGT12    LDGT34      LDGT      HDGV      LDDV      LDDT      HDDV        MC   All Veh
             GVWR:                 <6000     >6000     (All)
                       ------    ------    ------    ------    ------    ------    ------    ------    ------    ------
  VMT Distribution:    0.3522    0.2319    0.0790              0.0970    0.0003    0.0012    0.2337    0.0047    1.0000
 ---------------------------------------------------------------------------------------------------------------------
Composite Emission Factors (g/mi):
    Composite VOC :      0.533     0.500     0.701     0.551     0.398     0.108     0.202     0.194      2.44     0.455
    Composite NOX :      0.467     0.515     0.706     0.564     1.309     0.401     0.565     5.380      1.59     1.732
 ---------------------------------------------------------------------------------------------------------------------

* # # # # # # # # # # # # # # # # # # # # # # # # # # # #
* Scenario 2: Rural OPA (M6 Non-Ramp)
* File 1, Run 1, Scenario 2.
* # # # # # # # # # # # # # # # # # # # # # # # # # # # #
  M581 Warning:
            The user supplied freeway average speed of 57.8
            will be used for all hours of the day. 100% of VMT
            has been assigned to the freeway roadway type for
            all hours of the day and all vehicle types.
  M615 Comment:
               User supplied VMT mix.
  M 48 Warning:
               there are no sales for vehicle class HDGV8b
  M 48 Warning:
               there are no sales for vehicle class LDDT12

                    Calendar Year:  2015
                            Month:  July
                         Altitude:  Low
               Minimum Temperature:  64.0 (F)
               Maximum Temperature:  84.9 (F)
                 Absolute Humidity:   94. grains/lb
                  Nominal Fuel RVP:   9.0 psi
                     Weathered RVP:   8.8 psi
               Fuel Sulfur Content:   30. ppm

               Exhaust I/M Program:  No
                  Evap I/M Program:  No
                       ATP Program:  No
                  Reformulated Gas:  No
```

```
       Vehicle Type:      LDGV    LDGT12    LDGT34      LDGT      HDGV      LDDV      LDDT      HDDV        MC   All Veh
            GVWR:                 <6000     >6000     (All)
                       ------    ------    ------    ------    ------    ------    ------    ------    ------    ------
  VMT Distribution:    0.4329    0.2848    0.0972              0.0522    0.0004    0.0014    0.1259    0.0052    1.0000
 ---------------------------------------------------------------------------------------------------------------------
 Composite Emission Factors (g/mi):
    Composite VOC :      0.543     0.508     0.714     0.560     0.402     0.108     0.202     0.193      2.04     0.505
    Composite NOX :      0.456     0.502     0.689     0.549     1.259     0.313     0.441     4.286      1.42     1.020
 ---------------------------------------------------------------------------------------------------------------------

* # # # # # # # # # # # # # # # # # # # # # # # # #
* Scenario 3: Rural Minor Arterial (M6 Arterial/Collector)
* File 1, Run 1, Scenario 3.
* # # # # # # # # # # # # # # # # # # # # # # # # #
  M583 Warning:
            The user supplied arterial average speed of 53.8
            will be used for all hours of the day.  100% of VMT
            has been assigned to the arterial/collector roadway
            type for all hours of the day and all vehicle types.
  M615 Comment:
             User supplied VMT mix.
  M 48 Warning:
            there are no sales for vehicle class HDGV8b
  M 48 Warning:
            there are no sales for vehicle class LDDT12

                  Calendar Year:  2015
                         Month:  July
                      Altitude:  Low
            Minimum Temperature:  64.0 (F)
            Maximum Temperature:  84.9 (F)
              Absolute Humidity:   94. grains/lb
               Nominal Fuel RVP:   9.0 psi
                  Weathered RVP:   8.8 psi
            Fuel Sulfur Content:   30. ppm

            Exhaust I/M Program:  No
               Evap I/M Program:  No
                   ATP Program:  No
               Reformulated Gas:  No

       Vehicle Type:      LDGV    LDGT12    LDGT34      LDGT      HDGV      LDDV      LDDT      HDDV        MC   All Veh
            GVWR:                 <6000     >6000     (All)
                       ------    ------    ------    ------    ------    ------    ------    ------    ------    ------
  VMT Distribution:    0.4658    0.3065    0.1045              0.0341    0.0004    0.0015    0.0829    0.0043    1.0000
 ---------------------------------------------------------------------------------------------------------------------
 Composite Emission Factors (g/mi):
    Composite VOC :      0.552     0.515     0.725     0.568     0.412     0.109     0.204     0.198      1.86     0.530
    Composite NOX :      0.450     0.494     0.680     0.542     1.228     0.276     0.389     3.547      1.32     0.774
 ---------------------------------------------------------------------------------------------------------------------

* # # # # # # # # # # # # # # # # # # # # # # # # #
* Scenario 4: Rural Major Collector (M6 Arterial/Collector)
* File 1, Run 1, Scenario 4.
* # # # # # # # # # # # # # # # # # # # # # # # # #
  M583 Warning:
            The user supplied arterial average speed of 47.8
            will be used for all hours of the day.  100% of VMT
            has been assigned to the arterial/collector roadway
            type for all hours of the day and all vehicle types.
  M615 Comment:
             User supplied VMT mix.
  M 48 Warning:
            there are no sales for vehicle class HDGV8b
  M 48 Warning:
            there are no sales for vehicle class LDDT12

                  Calendar Year:  2015
                         Month:  July
                      Altitude:  Low
            Minimum Temperature:  64.0 (F)
            Maximum Temperature:  84.9 (F)
              Absolute Humidity:   94. grains/lb
               Nominal Fuel RVP:   9.0 psi
                  Weathered RVP:   8.8 psi
            Fuel Sulfur Content:   30. ppm

            Exhaust I/M Program:  No
               Evap I/M Program:  No
                   ATP Program:  No
               Reformulated Gas:  No

       Vehicle Type:      LDGV    LDGT12    LDGT34      LDGT      HDGV      LDDV      LDDT      HDDV        MC   All Veh
            GVWR:                 <6000     >6000     (All)
                       ------    ------    ------    ------    ------    ------    ------    ------    ------    ------
  VMT Distribution:    0.4817    0.3169    0.1080              0.0251    0.0004    0.0016    0.0614    0.0049    1.0000
 ---------------------------------------------------------------------------------------------------------------------
 Composite Emission Factors (g/mi):
    Composite VOC :      0.569     0.527     0.745     0.582     0.432     0.113     0.211     0.211      1.87     0.555
    Composite NOX :      0.441     0.484     0.668     0.531     1.181     0.241     0.339     3.120      1.19     0.666
 ---------------------------------------------------------------------------------------------------------------------

* # # # # # # # # # # # # # # # # # # # # # # # # #
* Scenario 5: Rural Minor Collector (M6 Arterial/Collector)
* File 1, Run 1, Scenario 5.
* # # # # # # # # # # # # # # # # # # # # # # # # #
  M583 Warning:
            The user supplied arterial average speed of 42.5
            will be used for all hours of the day.  100% of VMT
            has been assigned to the arterial/collector roadway
            type for all hours of the day and all vehicle types.
  M615 Comment:
             User supplied VMT mix.
  M 48 Warning:
            there are no sales for vehicle class HDGV8b
  M 48 Warning:
```

```
             there are no sales for vehicle class LDDT12

                  Calendar Year:  2015
                          Month:  July
                       Altitude:  Low
             Minimum Temperature:  64.0 (F)
             Maximum Temperature:  84.9 (F)
               Absolute Humidity:   94. grains/lb
                Nominal Fuel RVP:   9.0 psi
                   Weathered RVP:   8.8 psi
             Fuel Sulfur Content:   30. ppm

             Exhaust I/M Program:  No
                Evap I/M Program:  No
                     ATP Program:  No
                Reformulated Gas:  No

      Vehicle Type:      LDGV    LDGT12    LDGT34      LDGT      HDGV      LDDV      LDDT      HDDV        MC   All Veh
            GVWR:                 <6000     >6000     (All)
                        ------    ------    ------    ------    ------    ------    ------    ------    ------    ------
  VMT Distribution:     0.4528    0.2981    0.1016              0.0364    0.0004    0.0015    0.0881    0.0211    1.0000
 -------------------------------------------------------------------------------------------------------------------------
 Composite Emission Factors (g/mi):
    Composite VOC :       0.586     0.539     0.762     0.595     0.456     0.118     0.221     0.228      1.90     0.581
    Composite NOX :       0.434     0.475     0.658     0.522     1.133     0.222     0.312     2.839      1.14     0.721
 -------------------------------------------------------------------------------------------------------------------------

* # # # # # # # # # # # # # # # # # # # # # # # # #
* Scenario 6: Rural Local (M6 Arterial/Collector)
* File 1, Run 1, Scenario 6.
* # # # # # # # # # # # # # # # # # # # # # # # # #
  M583 Warning:
            The user supplied arterial average speed of 38.1
            will be used for all hours of the day.  100% of VMT
            has been assigned to the arterial/collector roadway
            type for all hours of the day and all vehicle types.
  M615 Comment:
              User supplied VMT mix.
  M 48 Warning:
             there are no sales for vehicle class HDGV8b
  M 48 Warning:
             there are no sales for vehicle class LDDT12

                  Calendar Year:  2015
                          Month:  July
                       Altitude:  Low
             Minimum Temperature:  64.0 (F)
             Maximum Temperature:  84.9 (F)
               Absolute Humidity:   94. grains/lb
                Nominal Fuel RVP:   9.0 psi
                   Weathered RVP:   8.8 psi
             Fuel Sulfur Content:   30. ppm

             Exhaust I/M Program:  No
                Evap I/M Program:  No
                     ATP Program:  No
                Reformulated Gas:  No

      Vehicle Type:      LDGV    LDGT12    LDGT34      LDGT      HDGV      LDDV      LDDT      HDDV        MC   All Veh
            GVWR:                 <6000     >6000     (All)
                        ------    ------    ------    ------    ------    ------    ------    ------    ------    ------
  VMT Distribution:     0.4785    0.3149    0.1073              0.0268    0.0004    0.0016    0.0660    0.0045    1.0000
 -------------------------------------------------------------------------------------------------------------------------
 Composite Emission Factors (g/mi):
    Composite VOC :       0.602     0.549     0.778     0.607     0.484     0.124     0.232     0.249      1.96     0.583
    Composite NOX :       0.429     0.469     0.651     0.515     1.100     0.213     0.300     2.768      1.12     0.640
 -------------------------------------------------------------------------------------------------------------------------

* # # # # # # # # # # # # # # # # # # # # # # # # #
* Scenario 7: Urban Interstate (M6 Freeway/Freeway Ramp)
* File 1, Run 1, Scenario 7.
* # # # # # # # # # # # # # # # # # # # # # # # # #
  M582 Warning:
            The user supplied freeway average speed of 54.1
            will be used for all hours of the day. 100% of VMT
            has been assigned to a fixed combination of freeways
            and freeway ramps for all hours of the day and all
             vehicle types.
  M615 Comment:
              User supplied VMT mix.
  M 48 Warning:
             there are no sales for vehicle class HDGV8b
  M 48 Warning:
             there are no sales for vehicle class LDDT12

                  Calendar Year:  2015
                          Month:  July
                       Altitude:  Low
             Minimum Temperature:  64.0 (F)
             Maximum Temperature:  84.9 (F)
               Absolute Humidity:   94. grains/lb
                Nominal Fuel RVP:   9.0 psi
                   Weathered RVP:   8.8 psi
             Fuel Sulfur Content:   30. ppm

             Exhaust I/M Program:  No
                Evap I/M Program:  No
                     ATP Program:  No
                Reformulated Gas:  No

      Vehicle Type:      LDGV    LDGT12    LDGT34      LDGT      HDGV      LDDV      LDDT      HDDV        MC   All Veh
            GVWR:                 <6000     >6000     (All)
                        ------    ------    ------    ------    ------    ------    ------    ------    ------    ------
  VMT Distribution:     0.4151    0.2732    0.0931              0.0627    0.0004    0.0014    0.1516    0.0025    1.0000
 -------------------------------------------------------------------------------------------------------------------------
 Composite Emission Factors (g/mi):
```

```
     Composite VOC :      0.554     0.516     0.727     0.570     0.413     0.110     0.206     0.200      1.98     0.500
     Composite NOX :      0.458     0.503     0.693     0.551     1.237     0.296     0.417     4.053      1.37     1.088
  ---------------------------------------------------------------------------------------------------------------------

* # # # # # # # # # # # # # # # # # # # # # # # # #
* Scenario 8: Urban Freeway/Expressway (M6 Freeway/Freeway Ramp)
* File 1, Run 1, Scenario 8.
* # # # # # # # # # # # # # # # # # # # # # # # # #
  M582 Warning:
            The user supplied freeway average speed of 55.5
            will be used for all hours of the day. 100% of VMT
            has been assigned to a fixed combination of freeways
            and freeway ramps for all hours of the day and all
             vehicle types.
  M615 Comment:
              User supplied VMT mix.
  M 48 Warning:
             there are no sales for vehicle class HDGV8b
  M 48 Warning:
             there are no sales for vehicle class LDDT12

                   Calendar Year:  2015
                           Month:  July
                        Altitude:  Low
             Minimum Temperature:  64.0 (F)
             Maximum Temperature:  84.9 (F)
               Absolute Humidity:   94. grains/lb
                Nominal Fuel RVP:   9.0 psi
                   Weathered RVP:   8.8 psi
             Fuel Sulfur Content:   30. ppm

             Exhaust I/M Program:  No
                Evap I/M Program:  No
                    ATP Program:  No
                Reformulated Gas:  No

       Vehicle Type:      LDGV    LDGT12    LDGT34      LDGT      HDGV      LDDV      LDDT      HDDV        MC   All Veh
              GVWR:                 <6000     >6000     (All)
                      ------    ------    ------    ------    ------    ------    ------    ------    ------    ------
   VMT Distribution:    0.4550    0.2995    0.1021              0.0406    0.0004    0.0015    0.0976    0.0033    1.0000
  ---------------------------------------------------------------------------------------------------------------------
 Composite Emission Factors (g/mi):
     Composite VOC :      0.551     0.514     0.723     0.567     0.409     0.109     0.205     0.198      2.07     0.521
     Composite NOX :      0.460     0.506     0.696     0.554     1.248     0.312     0.439     4.218      1.41     0.900
  ---------------------------------------------------------------------------------------------------------------------

* # # # # # # # # # # # # # # # # # # # # # # # # #
* Scenario 9: Urban OPA (M6 Arterial/Collector)
* File 1, Run 1, Scenario 9.
* # # # # # # # # # # # # # # # # # # # # # # # # #
  M583 Warning:
            The user supplied arterial average speed of 33.8
            will be used for all hours of the day.  100% of VMT
            has been assigned to the arterial/collector roadway
            type for all hours of the day and all vehicle types.
  M615 Comment:
              User supplied VMT mix.
  M 48 Warning:
             there are no sales for vehicle class HDGV8b
  M 48 Warning:
             there are no sales for vehicle class LDDT12

                   Calendar Year:  2015
                           Month:  July
                        Altitude:  Low
             Minimum Temperature:  64.0 (F)
             Maximum Temperature:  84.9 (F)
               Absolute Humidity:   94. grains/lb
                Nominal Fuel RVP:   9.0 psi
                   Weathered RVP:   8.8 psi
             Fuel Sulfur Content:   30. ppm

             Exhaust I/M Program:  No
                Evap I/M Program:  No
                    ATP Program:  No
                Reformulated Gas:  No

       Vehicle Type:      LDGV    LDGT12    LDGT34      LDGT      HDGV      LDDV      LDDT      HDDV        MC   All Veh
              GVWR:                 <6000     >6000     (All)
                      ------    ------    ------    ------    ------    ------    ------    ------    ------    ------
   VMT Distribution:    0.4864    0.3202    0.1092              0.0229    0.0004    0.0016    0.0553    0.0040    1.0000
  ---------------------------------------------------------------------------------------------------------------------
 Composite Emission Factors (g/mi):
     Composite VOC :      0.622     0.563     0.798     0.623     0.516     0.131     0.247     0.274      2.04     0.605
     Composite NOX :      0.429     0.466     0.649     0.513     1.060     0.210     0.296     2.679      1.09     0.606
  ---------------------------------------------------------------------------------------------------------------------

* # # # # # # # # # # # # # # # # # # # # # # # # #
* Scenario 10: Urban Minor Arterial (M6 Arterial/Collector)
* File 1, Run 1, Scenario 10.
* # # # # # # # # # # # # # # # # # # # # # # # # #
  M583 Warning:
            The user supplied arterial average speed of 26.4
            will be used for all hours of the day.  100% of VMT
            has been assigned to the arterial/collector roadway
            type for all hours of the day and all vehicle types.
  M615 Comment:
              User supplied VMT mix.
  M 48 Warning:
             there are no sales for vehicle class HDGV8b
  M 48 Warning:
             there are no sales for vehicle class LDDT12

                   Calendar Year:  2015
                           Month:  July
                        Altitude:  Low
```

```
              Minimum Temperature:  64.0 (F)
              Maximum Temperature:  84.9 (F)
                Absolute Humidity:   94. grains/lb
                 Nominal Fuel RVP:   9.0 psi
                    Weathered RVP:   8.8 psi
              Fuel Sulfur Content:   30. ppm

              Exhaust I/M Program:  No
                 Evap I/M Program:  No
                      ATP Program:  No
                 Reformulated Gas:  No

      Vehicle Type:      LDGV    LDGT12    LDGT34      LDGT      HDGV      LDDV      LDDT      HDDV        MC   All Veh
             GVWR:                <6000     >6000     (All)
                       ------    ------    ------    ------    ------    ------    ------    ------    ------    ------
 VMT Distribution:     0.4940    0.3250    0.1108              0.0185    0.0004    0.0016    0.0455    0.0042    1.0000
 ---------------------------------------------------------------------------------------------------------------------
 Composite Emission Factors (g/mi):
    Composite VOC :       0.673     0.603     0.856     0.667     0.605     0.150     0.282     0.340      2.24      0.660
    Composite NOX :       0.450     0.484     0.672     0.532     1.003     0.218     0.307     2.821      1.02      0.606
 ---------------------------------------------------------------------------------------------------------------------

* # # # # # # # # # # # # # # # # # # # # # # # # # #
* Scenario 11: Urban Collector (M6 Arterial/Collector)
* File 1, Run 1, Scenario 11.
* # # # # # # # # # # # # # # # # # # # # # # # # # #
  M583 Warning:
            The user supplied arterial average speed of 28.0
            will be used for all hours of the day.  100% of VMT
            has been assigned to the arterial/collector roadway
            type for all hours of the day and all vehicle types.
  M615 Comment:
             User supplied VMT mix.
  M 48 Warning:
            there are no sales for vehicle class HDGV8b
  M 48 Warning:
            there are no sales for vehicle class LDDT12

                  Calendar Year:  2015
                          Month:  July
                       Altitude:  Low
              Minimum Temperature:  64.0 (F)
              Maximum Temperature:  84.9 (F)
                Absolute Humidity:   94. grains/lb
                 Nominal Fuel RVP:   9.0 psi
                    Weathered RVP:   8.8 psi
              Fuel Sulfur Content:   30. ppm

              Exhaust I/M Program:  No
                 Evap I/M Program:  No
                      ATP Program:  No
                 Reformulated Gas:  No

      Vehicle Type:      LDGV    LDGT12    LDGT34      LDGT      HDGV      LDDV      LDDT      HDDV        MC   All Veh
             GVWR:                <6000     >6000     (All)
                       ------    ------    ------    ------    ------    ------    ------    ------    ------    ------
 VMT Distribution:     0.5019    0.3303    0.1126              0.0139    0.0005    0.0017    0.0335    0.0056    1.0000
 ---------------------------------------------------------------------------------------------------------------------
 Composite Emission Factors (g/mi):
    Composite VOC :       0.660     0.593     0.842     0.656     0.580     0.145     0.273     0.322      2.19      0.654
    Composite NOX :       0.444     0.478     0.664     0.526     1.013     0.215     0.303     2.751      1.04      0.568
 ---------------------------------------------------------------------------------------------------------------------

* # # # # # # # # # # # # # # # # # # # # # # # # # #
* Scenario 12: Urban Local (M6 Local Road) - 12.9
* File 1, Run 1, Scenario 12.
* # # # # # # # # # # # # # # # # # # # # # # # # # #

* Reading Hourly Roadway VMT distribution from the following external
* data file: FVMTLOCL.DEF

  Reading User Supplied ROADWAY VMT Factors
  M615 Comment:
             User supplied VMT mix.
  M 48 Warning:
            there are no sales for vehicle class HDGV8b
  M 48 Warning:
            there are no sales for vehicle class LDDT12

                  Calendar Year:  2015
                          Month:  July
                       Altitude:  Low
              Minimum Temperature:  64.0 (F)
              Maximum Temperature:  84.9 (F)
                Absolute Humidity:   94. grains/lb
                 Nominal Fuel RVP:   9.0 psi
                    Weathered RVP:   8.8 psi
              Fuel Sulfur Content:   30. ppm

              Exhaust I/M Program:  No
                 Evap I/M Program:  No
                      ATP Program:  No
                 Reformulated Gas:  No

      Vehicle Type:      LDGV    LDGT12    LDGT34      LDGT      HDGV      LDDV      LDDT      HDDV        MC   All Veh
             GVWR:                <6000     >6000     (All)
                       ------    ------    ------    ------    ------    ------    ------    ------    ------    ------
 VMT Distribution:     0.5094    0.3354    0.1144              0.0097    0.0005    0.0017    0.0263    0.0026    1.0000
 ---------------------------------------------------------------------------------------------------------------------
 Composite Emission Factors (g/mi):
    Composite VOC :       0.926     0.843     1.170     0.926     1.050     0.216     0.406     0.583      3.07      0.923
    Composite NOX :       0.442     0.468     0.642     0.512     0.911     0.282     0.397     3.808      0.88      0.568
 ---------------------------------------------------------------------------------------------------------------------
```